FIG.1

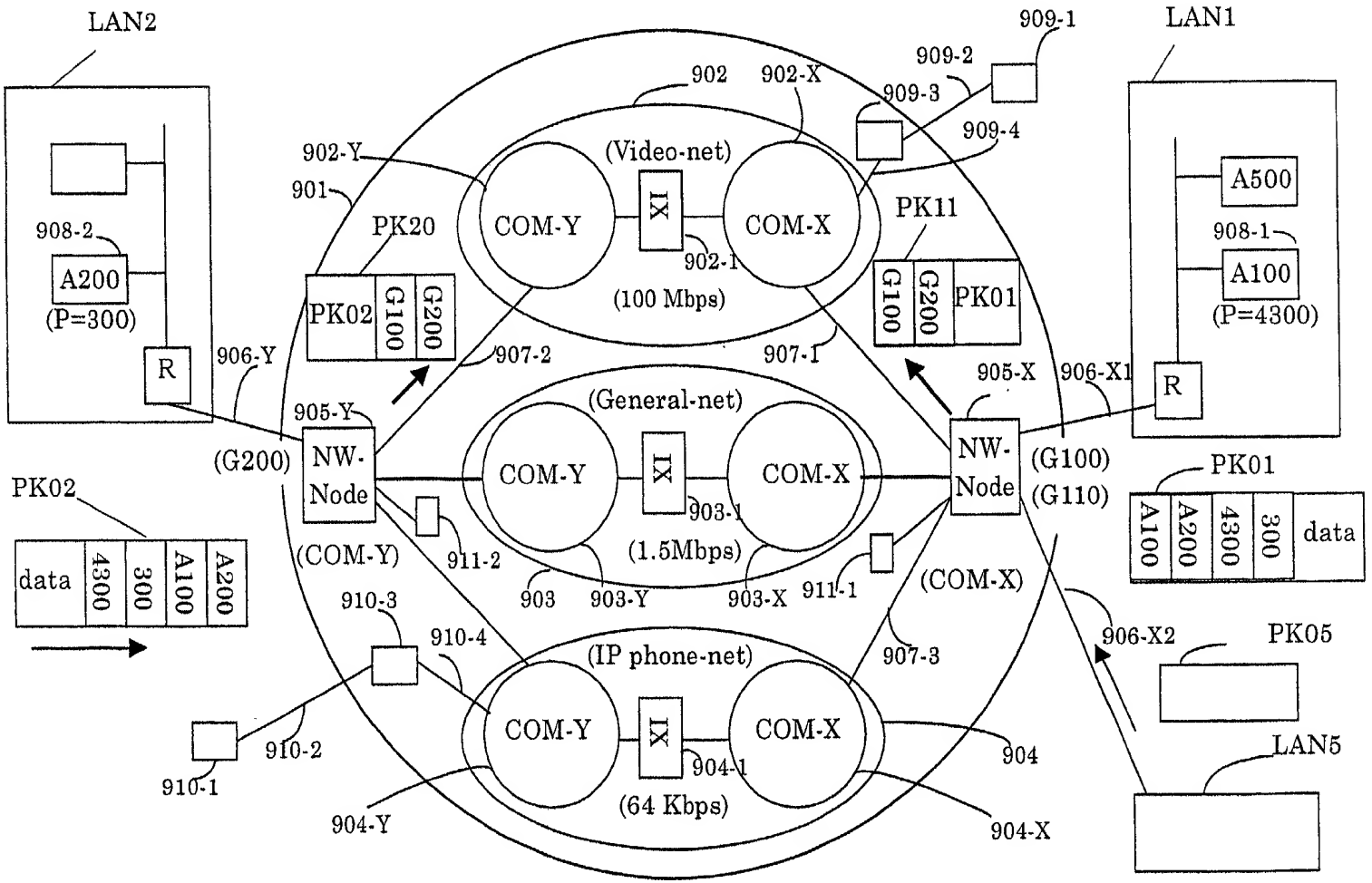

LAN2
LAN1
909-1
909-2
909-3
909-4
902
902-X
902-Y
901
(Video-net)
COM-Y
IX
COM-X
902-1
PK20
PK11
908-2
A200
(P=300)
PK02
G100
G200
(100 Mbps)
PK01
907-1
907-2
906-Y
906-X1
905-X
905-Y
(General-net)
R
A500
908-1
A100
(P=4300)
(G200)
NW-Node
(G100)
(G110)
903-1
(1.5Mbps)
911-2
911-1
903
903-Y
903-X
(COM-Y)
(COM-X)
PK02
data
4300
300
A100
A200
PK01
910-3
910-4
906-X2
PK05
(IP phone-net)
907-3
910-2
910-1
904
904-1
LAN5
904-Y
(64 Kbps)
904-X

FIG.2

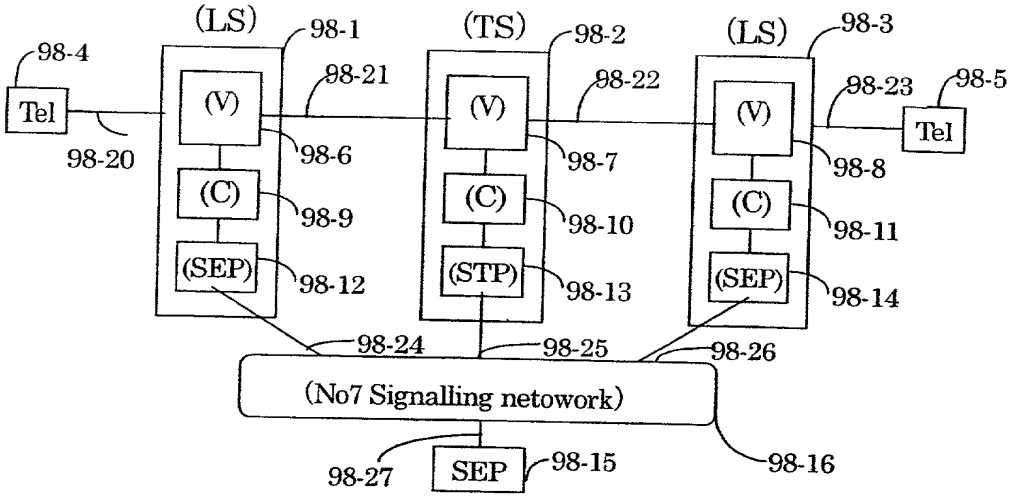
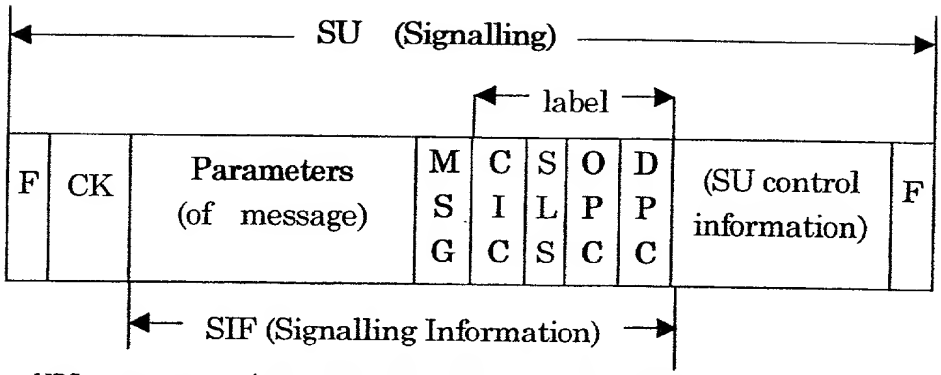

(LS)
98-1
(TS)
98-2
(LS)
98-3
98-4
98-21
98-22
98-23
98-5
Tel
(V)
(V)
(V)
Tel
98-20
98-6
98-7
98-8
(C)
(C)
(C)
98-9
98-10
98-11
(SEP)
(STP)
(SEP)
98-12
98-13
98-14
98-24
98-25
98-26
(No7 Signalling netowork)
98-27
SEP
98-15
98-16

FIG.3



MSG: message (IAM, ACM, CPG, ANM, REL, RLC, SUS, RES, CON, etc.)
OPC : origin point code DPC : destination point code
CIC: circuit identification code
SLS= Signalling Link Selection
F: flag (01111110) CK: check code

FIG.4

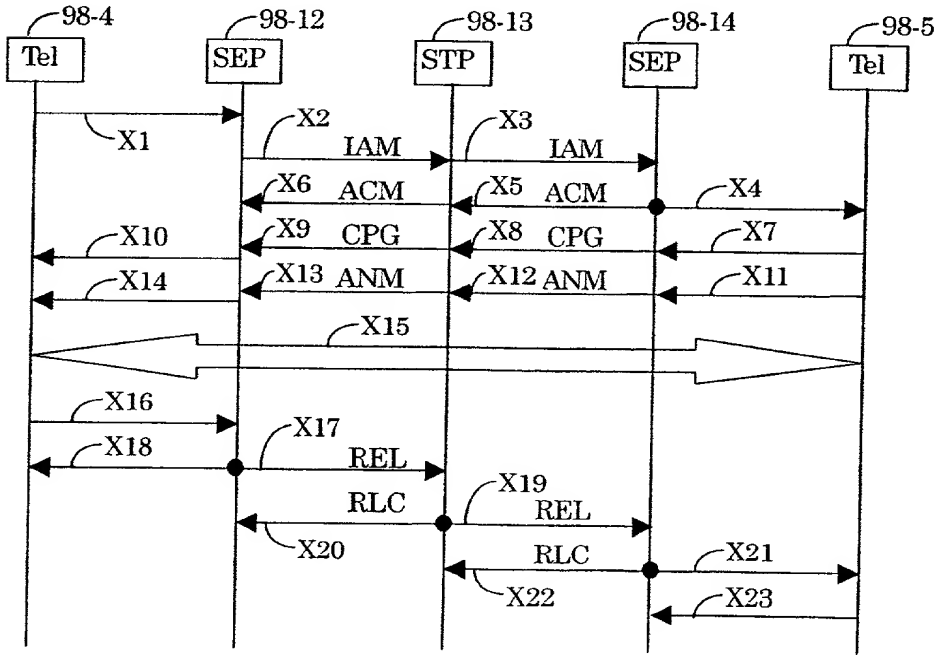


FIG.5

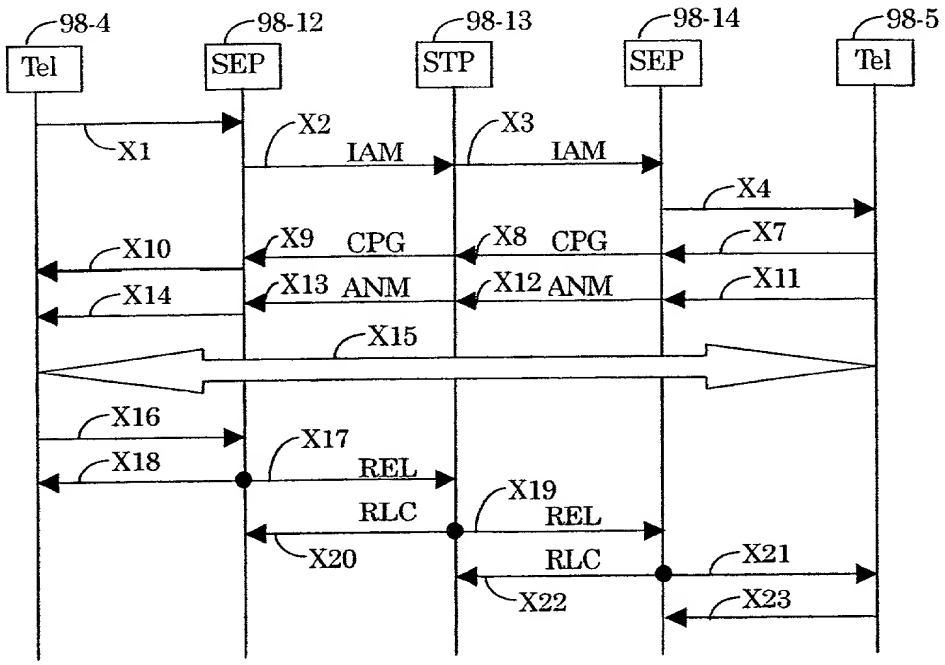

98-4
Tel
98-12
SEP
98-13
STP
98-14
SEP
98-5
Tel
X1
X2
IAM
X3
IAM
X4
X10
X9
CPG
X8
CPG
X7
X14
X13
ANM
X12
ANM
X11
X15
X16
X18
X17
REL
X19
RLC
REL
X20
RLC
X21
X22
X23

FIG.6

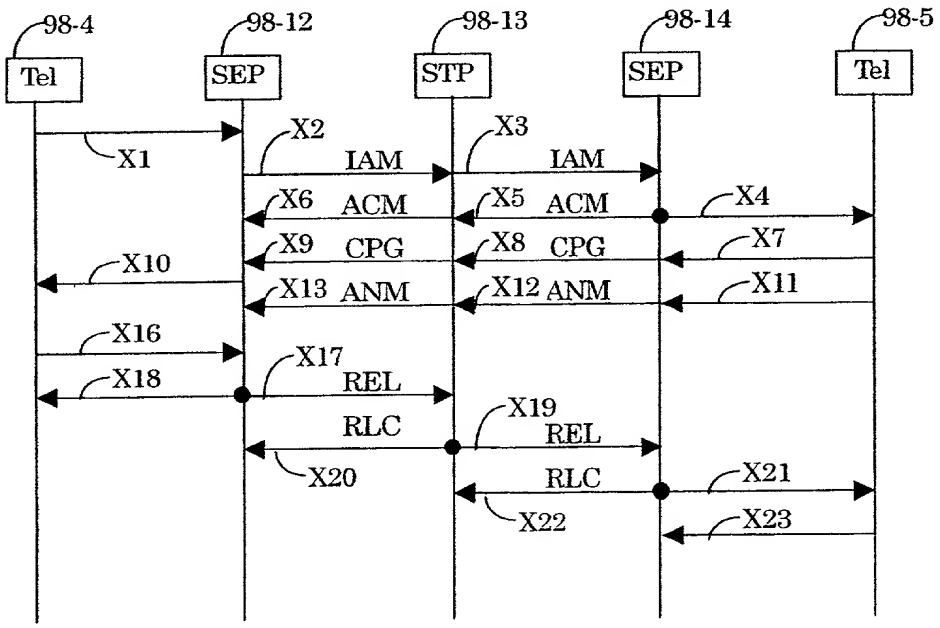

98-4
Tel
98-12
SEP
98-13
STP
98-14
SEP
98-5
Tel
X1
X2
IAM
X3
IAM
X6
ACM
X5
ACM
X4
X9
CPG
X8
CPG
X7
X10
X13
ANM
X12
ANM
X11
X16
X18
X17
REL
X19
RLC
REL
X20
RLC
X21
X22
X23

FIG.7

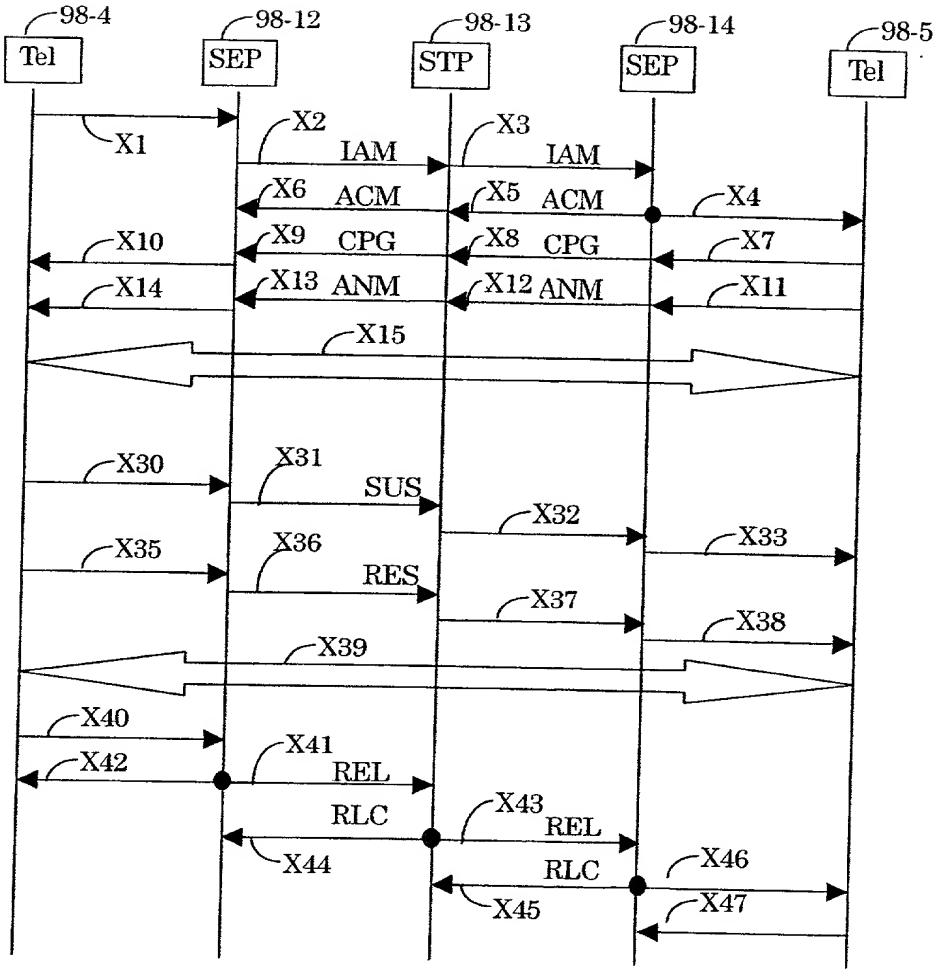

98-4
Tel
98-12
SEP
98-13
STP
98-14
SEP
98-5
Tel
X1
X2
IAM
X3
IAM
X6
ACM
X5
ACM
X4
X10
X9
CPG
X8
CPG
X7
X14
X13
ANM
X12
ANM
X11
X15
X30
X31
SUS
X32
X33
X35
X36
RES
X37
X38
X39
X40
X41
X42
REL
RLC
X43
REL
X44
RLC
X46
X45
X47

FIG.8

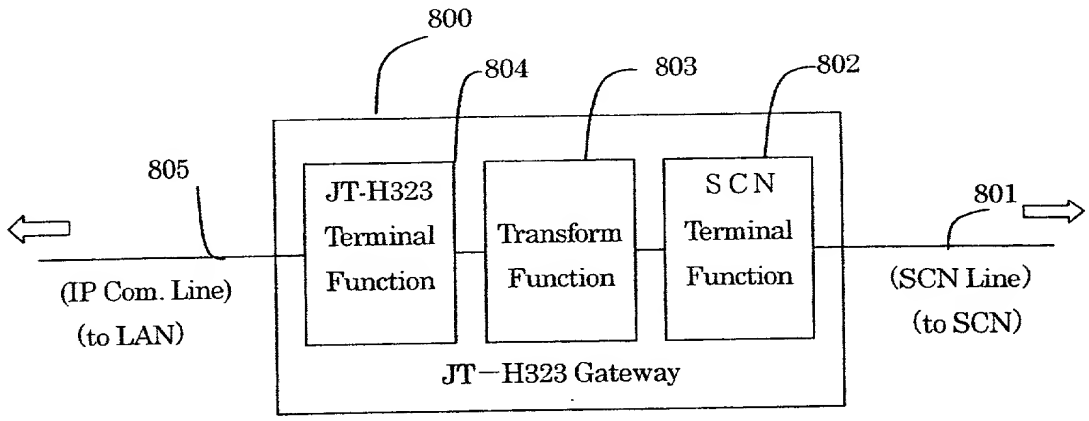


FIG.9

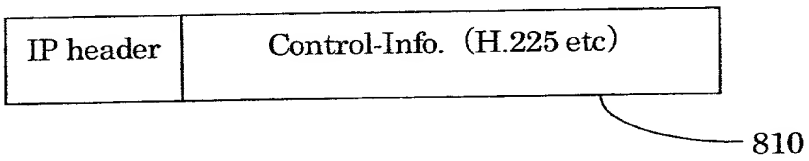


FIG.10

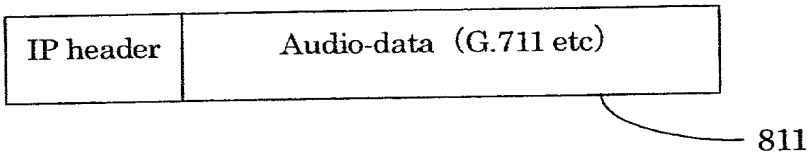


FIG.11

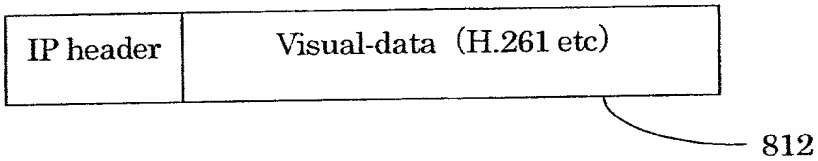


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FIG.12

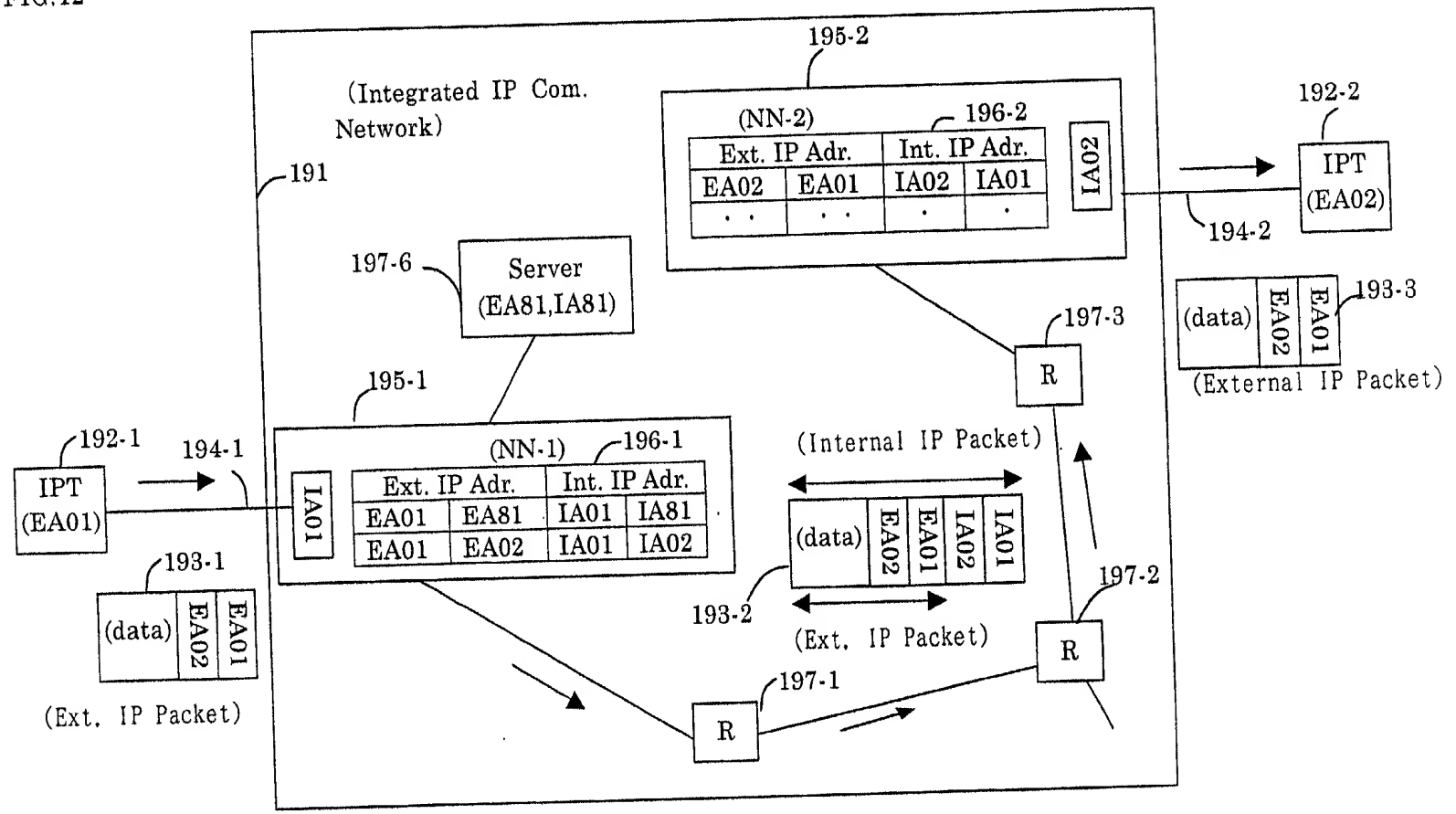

FIG.13

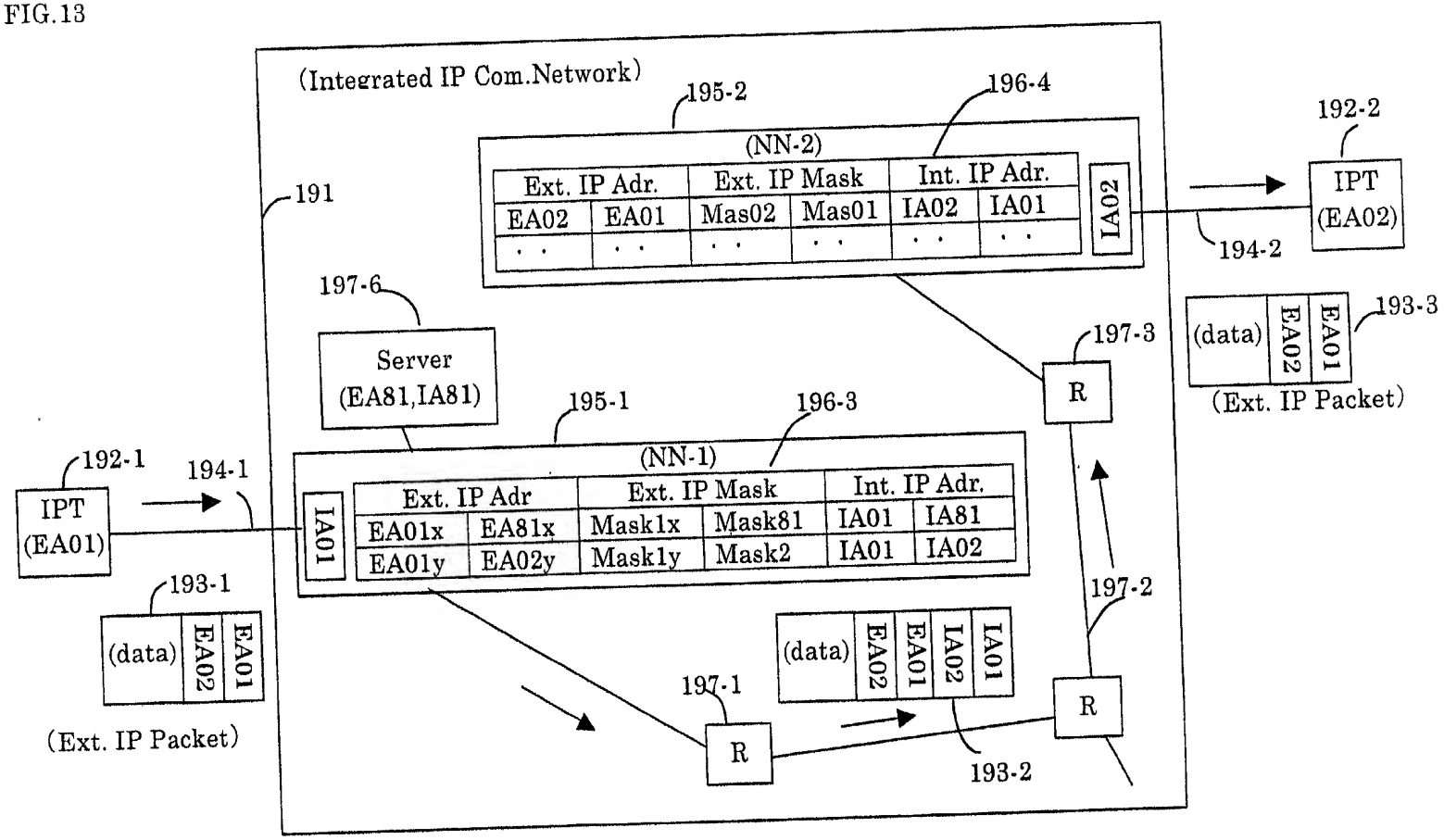
(Integrated IP Com.Network)
191
195-2
196-4
(NN-2)
Ext. IP Adr.
Ext. IP Mask
Int. IP Adr.
EA02
EA01
Mas02
Mas01
IA02
IA01
IA02
192-2
IPT
(EA02)
194-2
197-6
Server
(EA81,IA81)
197-3
R
(data)
EA02
EA01
193-3
(Ext. IP Packet)
195-1
196-3
(NN-1)
192-1
194-1
IPT
(EA01)
IA01
Ext. IP Adr
Ext. IP Mask
Int. IP Adr.
EA01x
EA81x
Mask1x
Mask81
IA01
IA81
EA01y
EA02y
Mask1y
Mask2
IA01
IA02
193-1
(data)
EA02
EA01
(Ext. IP Packet)
197-2
(data)
EA02
EA01
IA02
IA01
197-1
R
R
193-2

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FIG.14

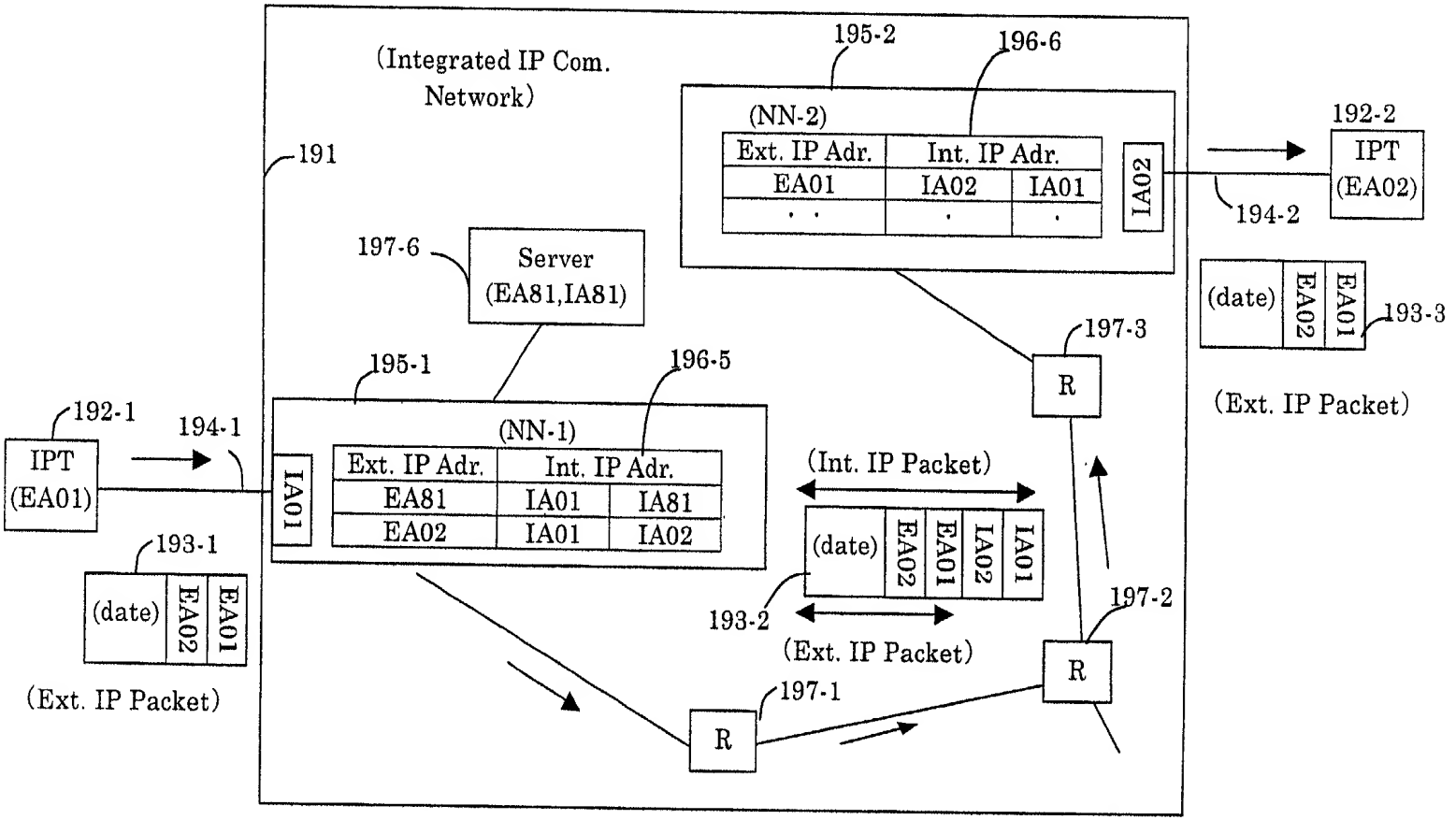

FIG.15

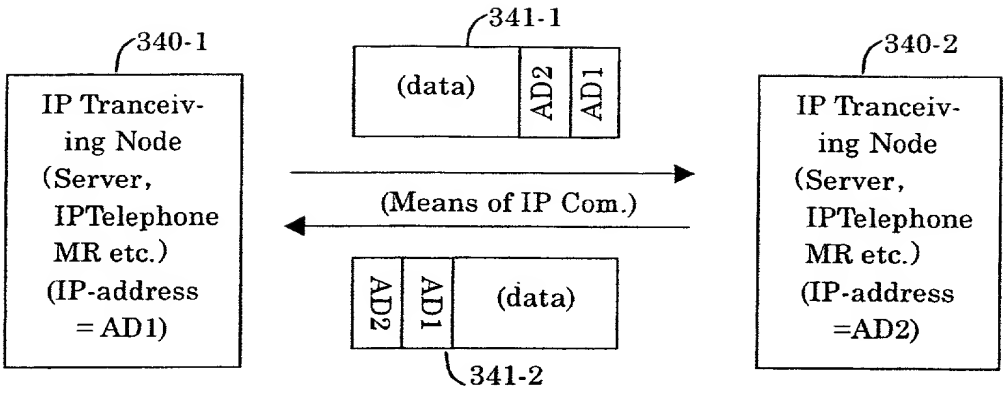
340-1
IP Tranceiv-ing Node (Server, IPTelephone MR etc.) (IP-address = AD1)
341-1
(data)
AD2
AD1
(Means of IP Com.)
AD2
AD1
(data)
341-2
340-2
IP Tranceiv-ing Node (Server, IPTelephone MR etc.) (IP-address =AD2)

FIG.16

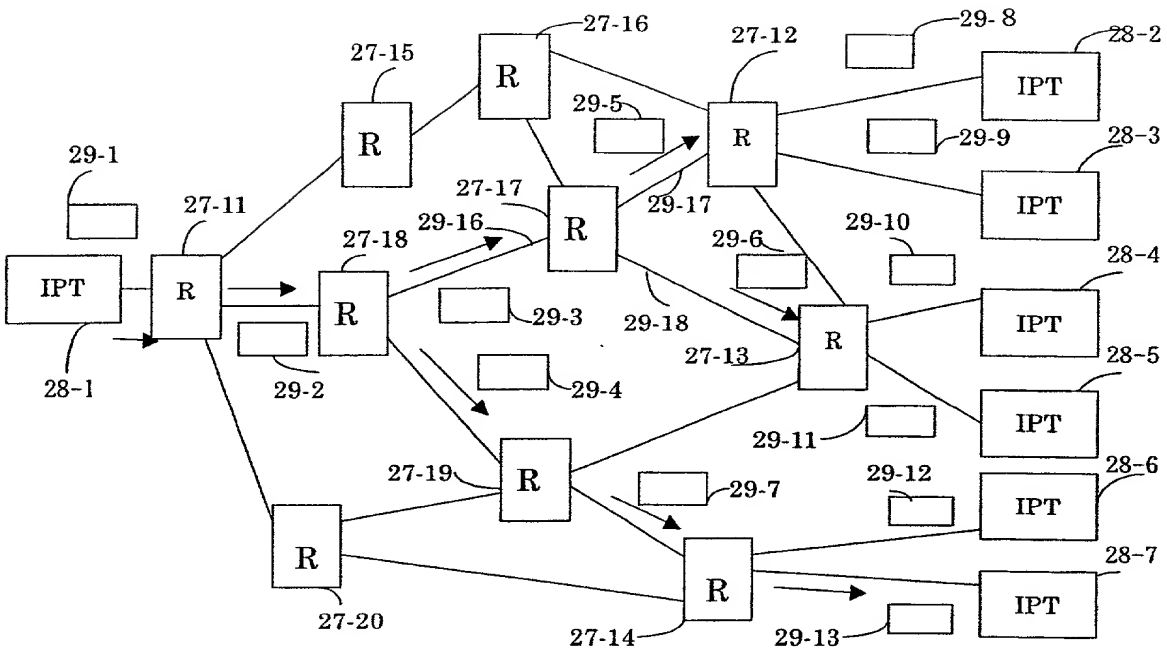
IPT
R
27-11
28-1
29-1
27-15
27-16
27-17
27-18
27-19
27-20
27-12
27-13
27-14
29-2
29-3
29-4
29-5
29-6
29-7
29-8
29-9
29-10
29-11
29-12
29-13
29-16
29-17
29-18
28-2
28-3
28-4
28-5
28-6
28-7

FIG.17

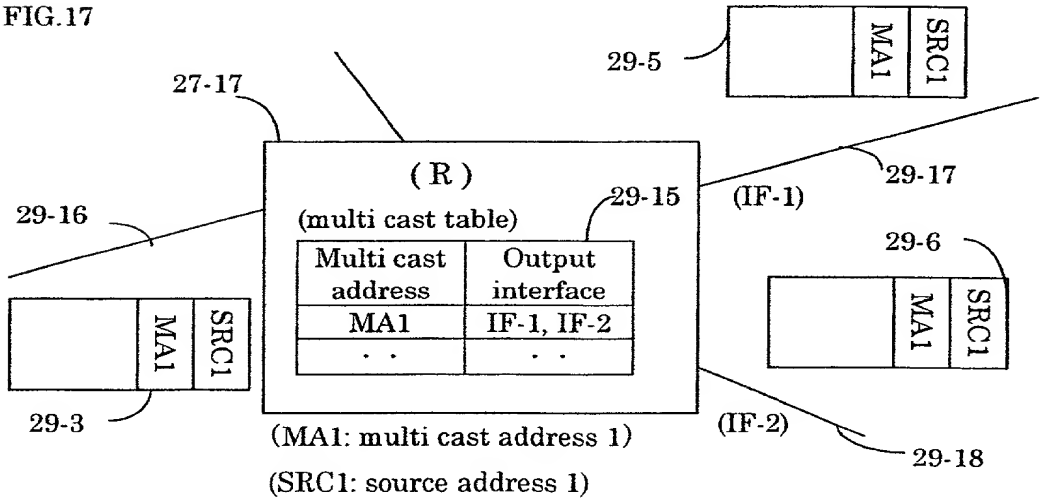
29-5
MA1
SRC1
27-17
(R)
(multi cast table)
29-15
Multi cast address
Output interface
MA1
IF-1, IF-2
29-16
(IF-1)
29-17
29-6
29-3
(IF-2)
29-18
(MA1: multi cast address 1)
(SRC1: source address 1)

FIG.18

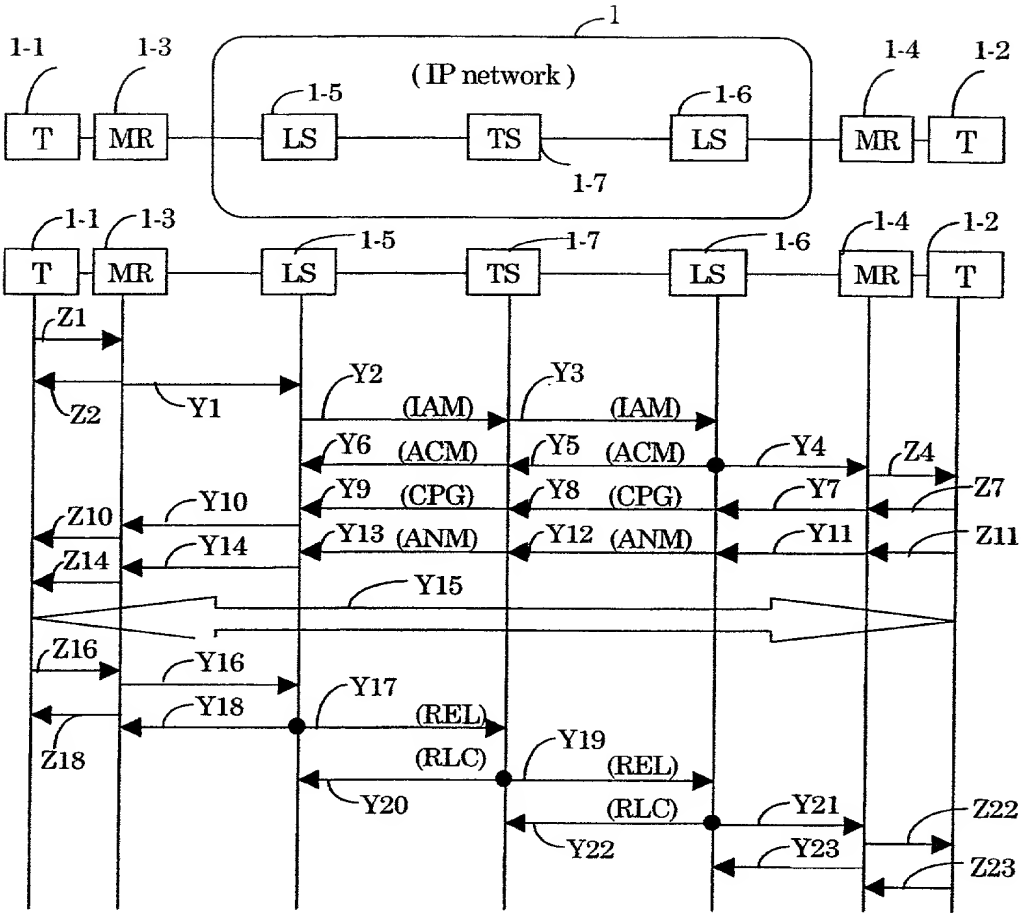
1
(IP network)
1-1
1-3
1-4
1-2
1-5
1-6
1-7
T
MR
LS
TS
LS
MR
T
Z1
Z2
Y1
Y2
(IAM)
Y3
(IAM)
Y6
(ACM)
Y5
(ACM)
Y4
Z4
Y9
(CPG)
Y8
(CPG)
Y7
Z7
Z10
Y10
Y13
(ANM)
Y12
(ANM)
Y11
Z11
Z14
Y14
Y15
Z16
Y16
Y17
(REL)
Y18
Z18
(RLC)
Y19
(REL)
Y20
(RLC)
Y21
Z22
Y22
Y23
Z23

FIG.19

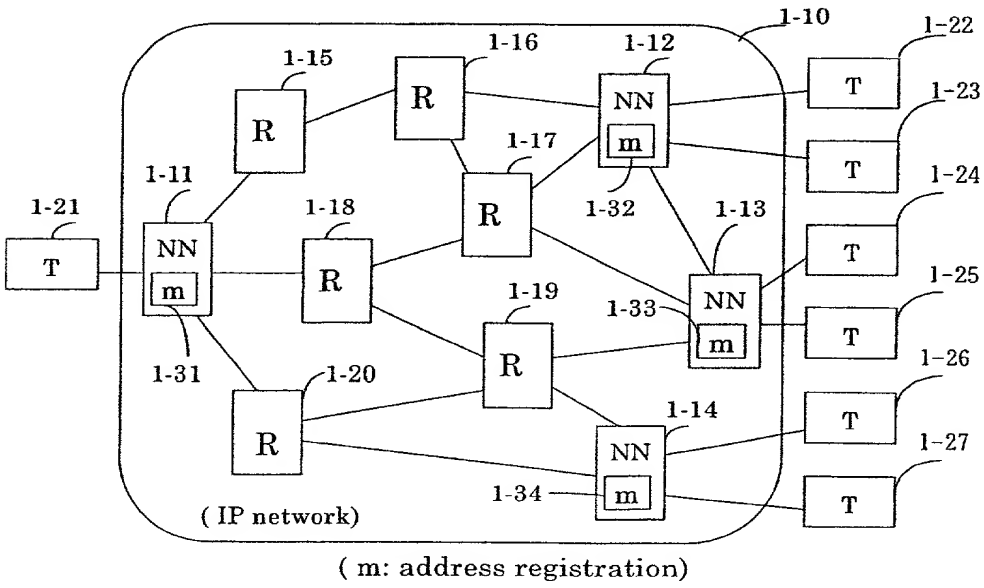
1-10
1-22
1-15
1-16
1-12
1-23
R
R
NN
m
T
T
1-17
1-11
1-24
1-21
1-18
1-32
1-13
R
T
T
NN
m
1-25
1-19
1-33
1-31
R
T
1-26
1-20
1-14
R
NN
m
T
1-27
1-34
T
(IP network)
(m: address registration)

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FIG.20

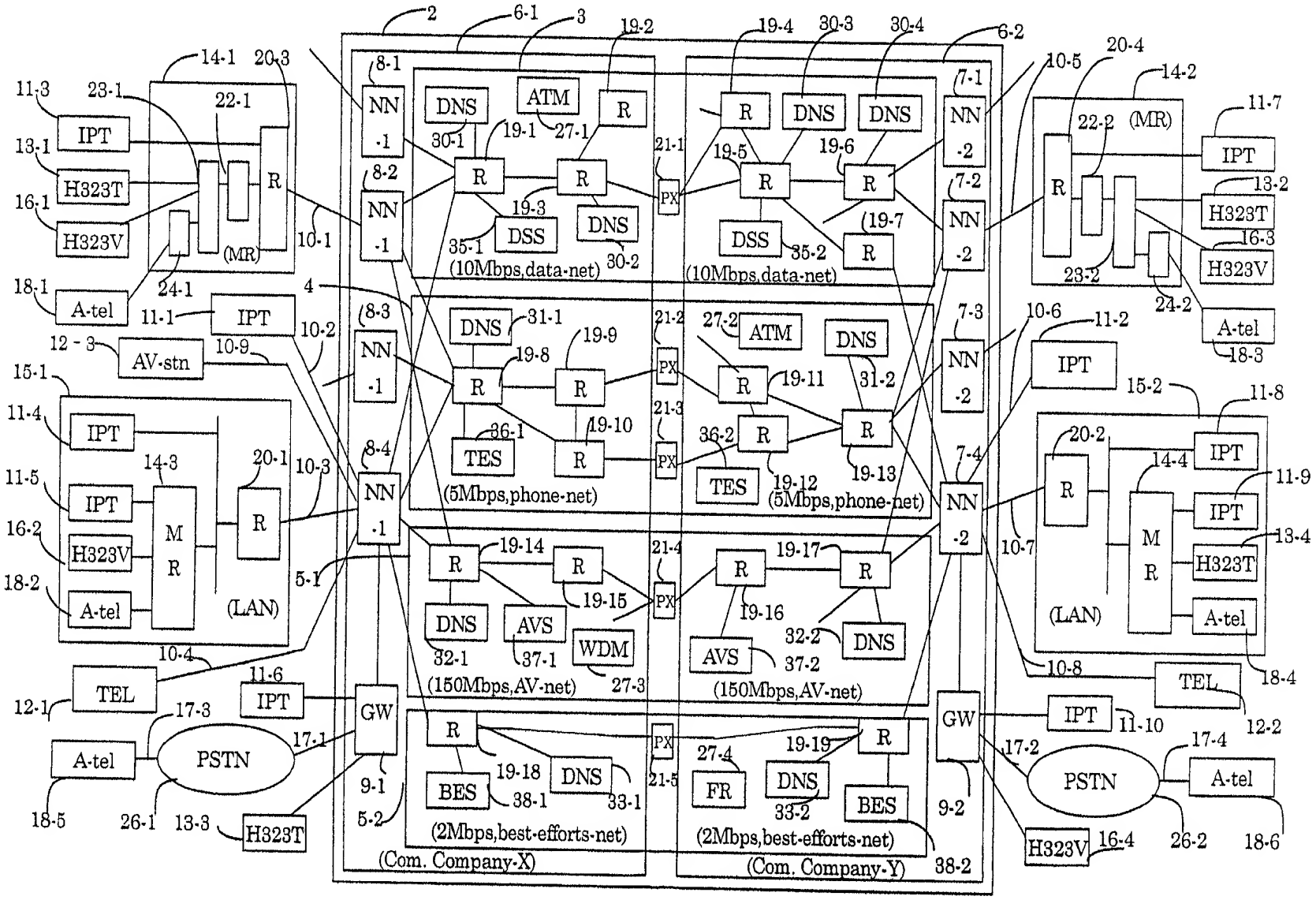


FIG.21

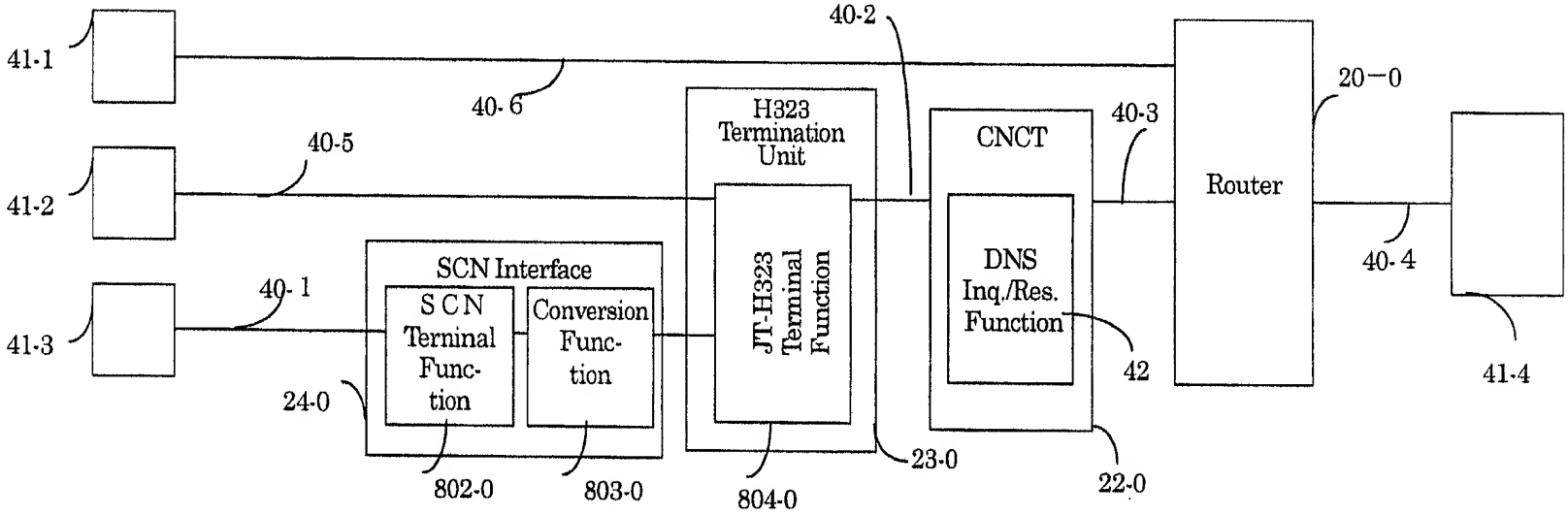


FIG.22

IP Header	DNS Format Header Sec./Inq./Res. Sec./Answer Sec./Authority Sec./Addtional Information Sec

43

FIG.23

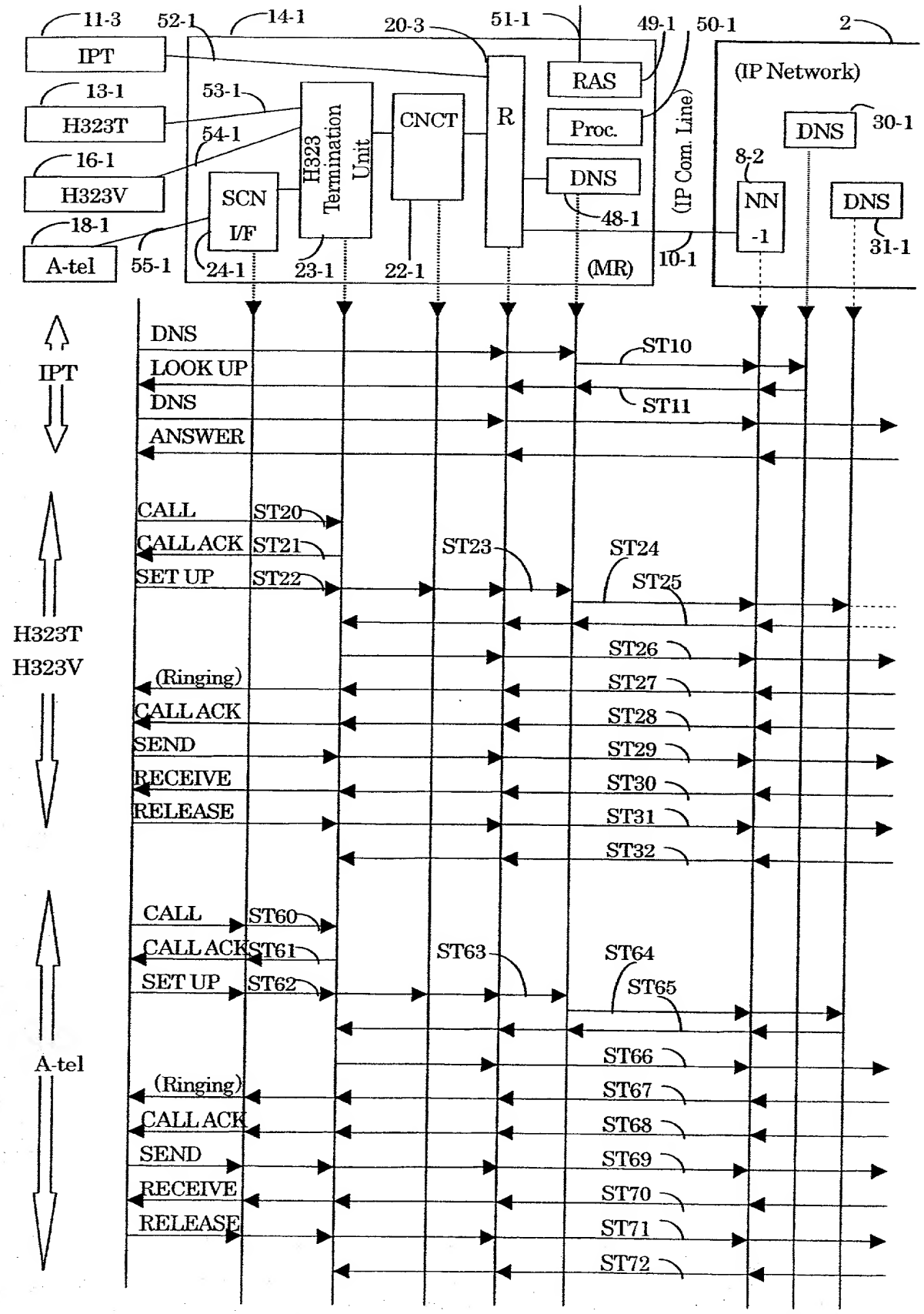

11-3
52-1
14-1
20-3
51-1
49-1
50-1
2
IPT
(IP Network)
13-1
53-1
H323T
54-1
H323 Termination Unit
CNCT
R
RAS
Proc.
DNS
30-1
16-1
8-2
H323V
SCN I/F
DNS
NN -1
DNS
48-1
(IP Com. Line)
18-1
A-tel
55-1
24-1
23-1
22-1
(MR)
10-1
31-1
IPT
DNS
LOOK UP
DNS
ANSWER
ST10
ST11
H323T
H323V
CALL
CALL ACK
SET UP
ST20
ST21
ST22
ST23
ST24
ST25
ST26
(Ringing)
CALL ACK
SEND
RECEIVE
RELEASE
ST27
ST28
ST29
ST30
ST31
ST32
A-tel
CALL
CALL ACK
SET UP
ST60
ST61
ST62
ST63
ST64
ST65
ST66
(Ringing)
CALL ACK
SEND
RECEIVE
RELEASE
ST67
ST68
ST69
ST70
ST71
ST72

FIG.24

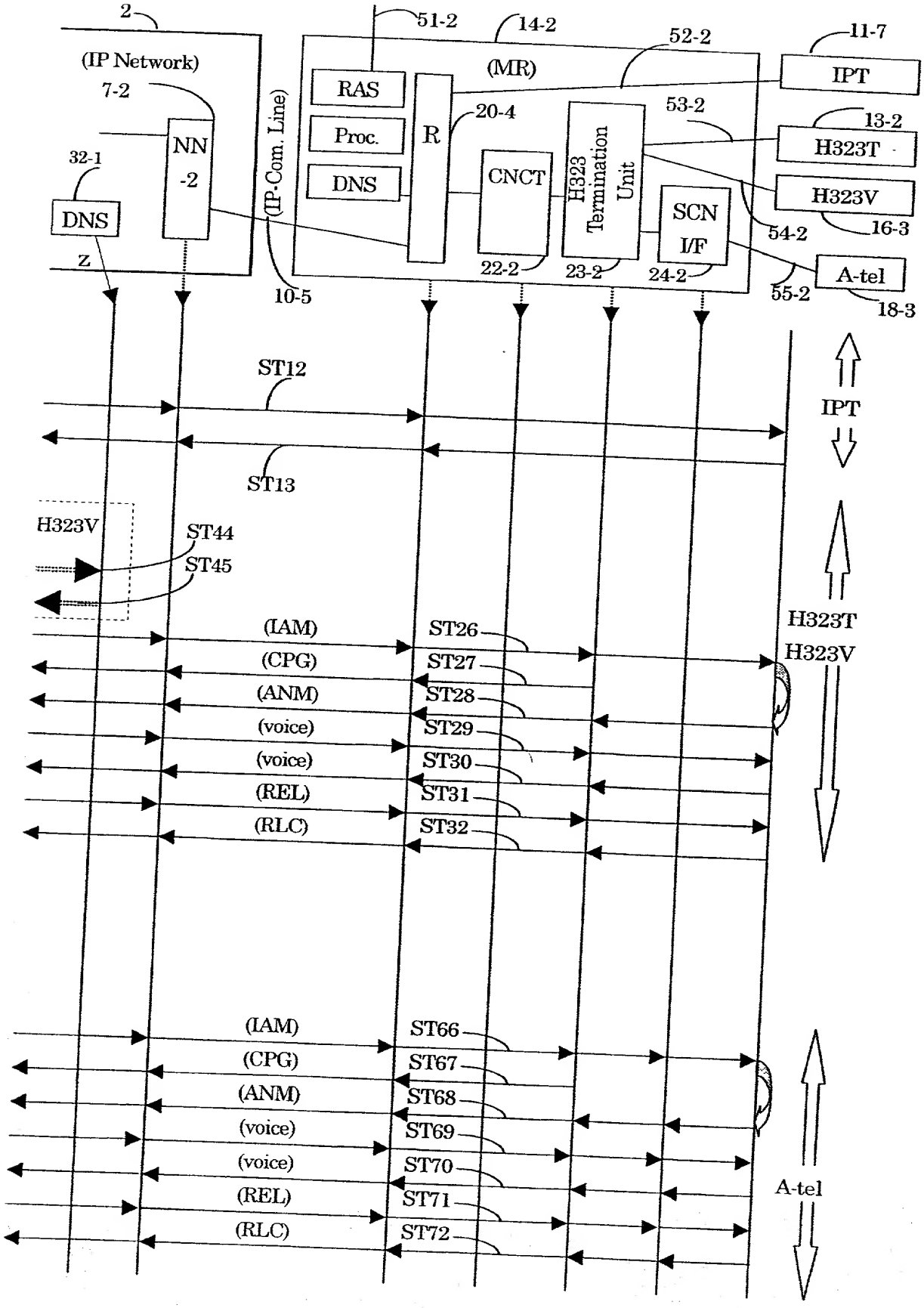

2
(IP Network)
7-2
NN
-2
32-1
DNS
z
(IP-Com. Line)
10-5
51-2
14-2
(MR)
RAS
Proc.
DNS
R
20-4
CNCT
22-2
H323 Termination Unit
23-2
SCN I/F
24-2
52-2
53-2
54-2
55-2
11-7
IPT
13-2
H323T
H323V
16-3
A-tel
18-3
ST12
ST13
IPT
H323V
ST44
ST45
(IAM)
(CPG)
(ANM)
(voice)
(voice)
(REL)
(RLC)
ST26
ST27
ST28
ST29
ST30
ST31
ST32
H323T
H323V
(IAM)
(CPG)
(ANM)
(voice)
(voice)
(REL)
(RLC)
ST66
ST67
ST68
ST69
ST70
ST71
ST72
A-tel

FIG.25

44−1

External IP Address	Communication Line Identification Symbol
A481	Line-10-1
A113	Line-10-1
A131	Line-10-1
A161	Line-10-1
A181	Line-10-1
. .	. .

FIG.26

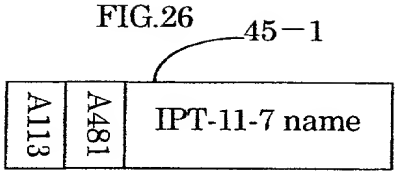


FIG.27

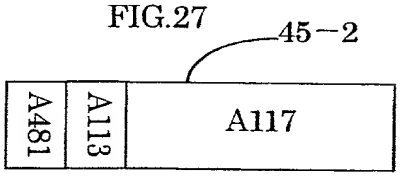


FIG.28

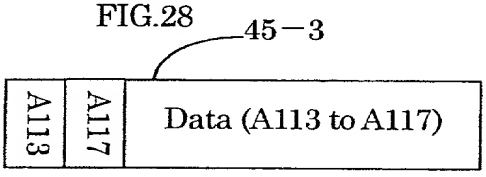


FIG.29

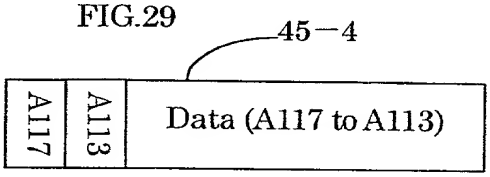


FIG.30

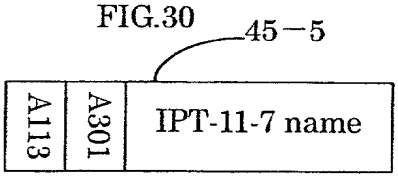


FIG.31

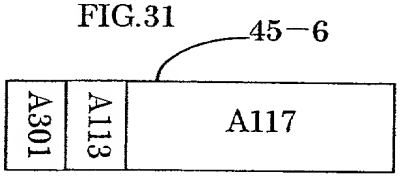


FIG.32

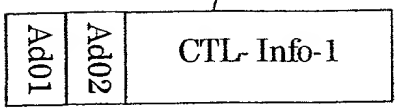


FIG.33

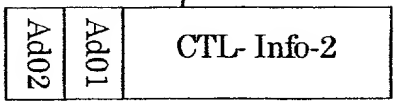


FIG.34

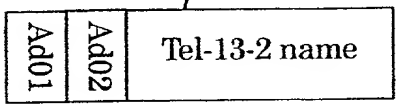


FIG.35

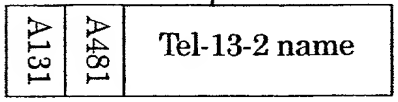


FIG.36

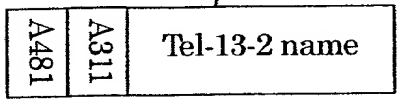


FIG.37

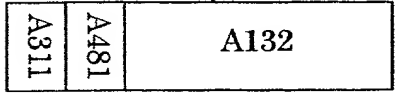


FIG.38

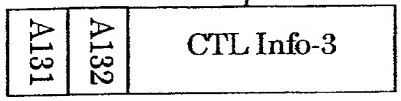


FIG.39

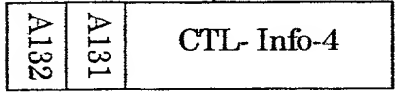


FIG.40

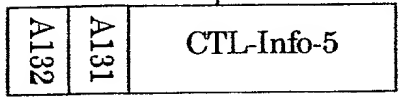


FIG.41

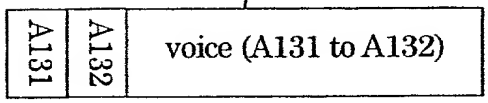


FIG.42

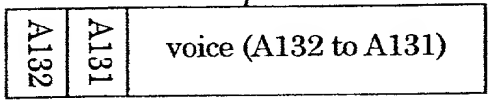


FIG.43

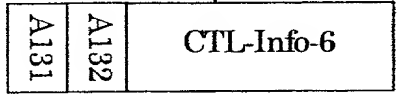


FIG.44

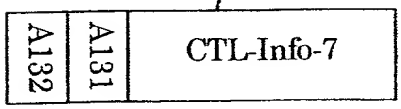


FIG.45

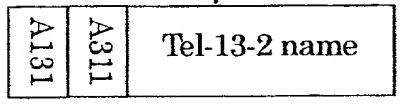


FIG.46

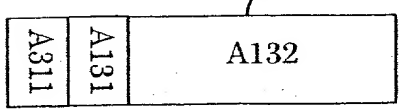


FIG.47

100-1

Line Identifier	Phone No. (Host Name)	Terminal IP Address	Kind of Terminal	Speed	Kind of Line
53−1	81-3-1234-5679	32.3.53.1	H323T	64Kbps	ISDN
54−1	81-3-1200-2002	32.3.54.1	H323V	1.5Mbps	
55−1	81-47-325-3887	20.0.55.1	A-tel	64Kbps	ISDN
. .	. .	. .			. .

FIG.48

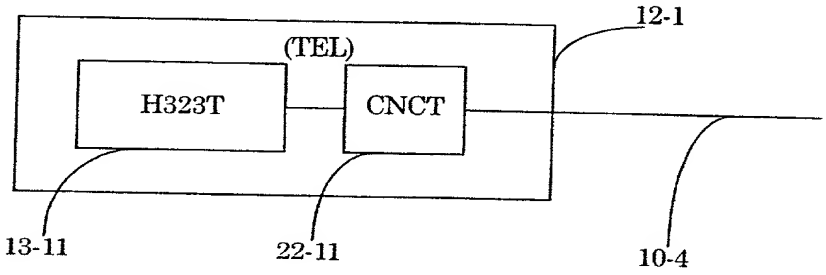


FIG.49

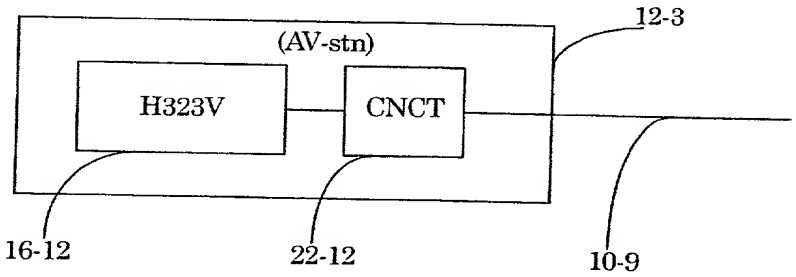


FIG.50

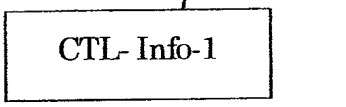


FIG.51

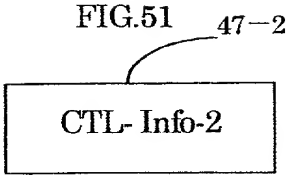


FIG.52

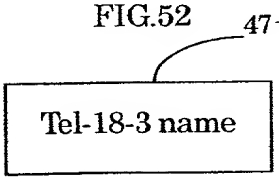


FIG.53

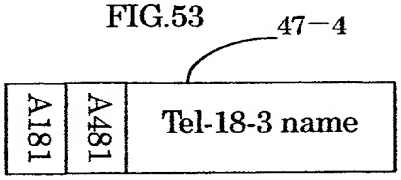


FIG.54

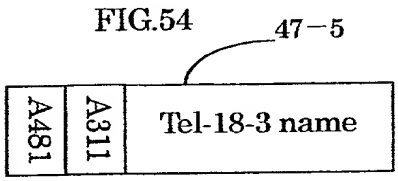


FIG.55

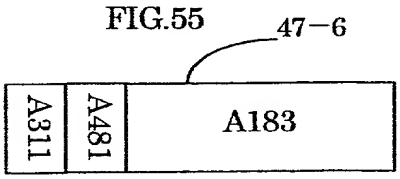


FIG.56

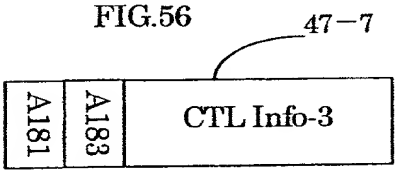


FIG.57

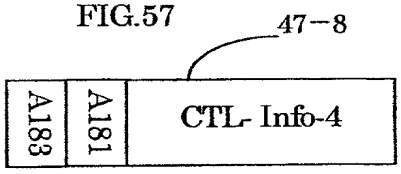


FIG.58

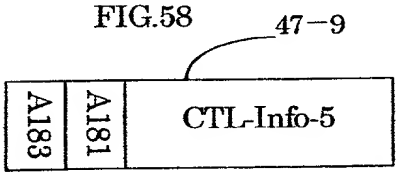


FIG.59

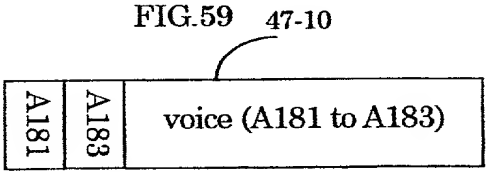


FIG.60

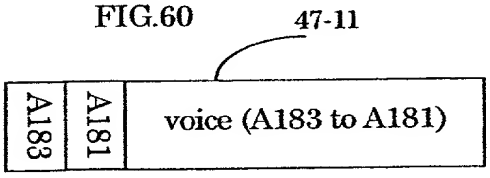


FIG.61

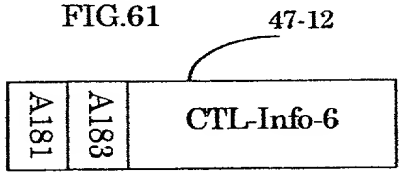


FIG.62

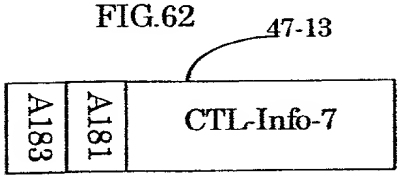


FIG.63

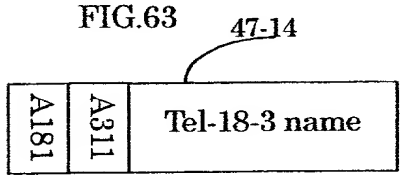


FIG.64

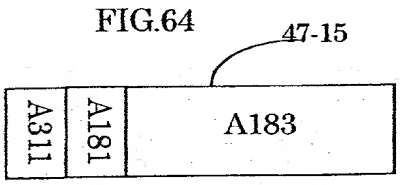


FIG.65

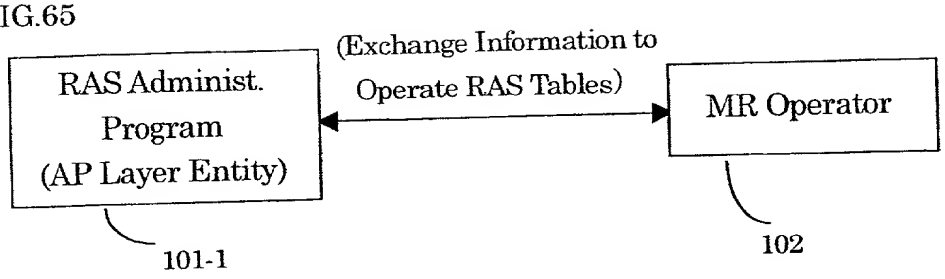


FIG.66

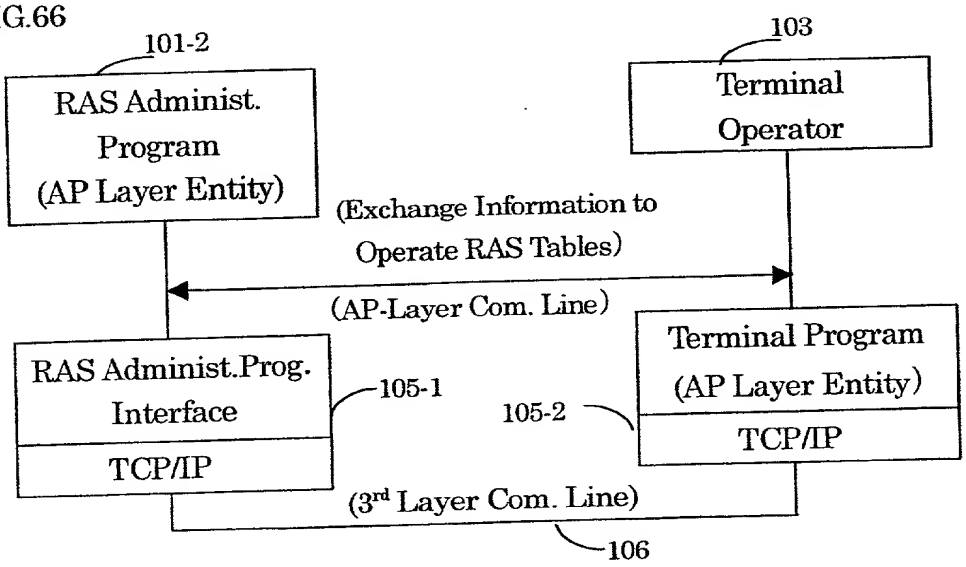


FIG.67

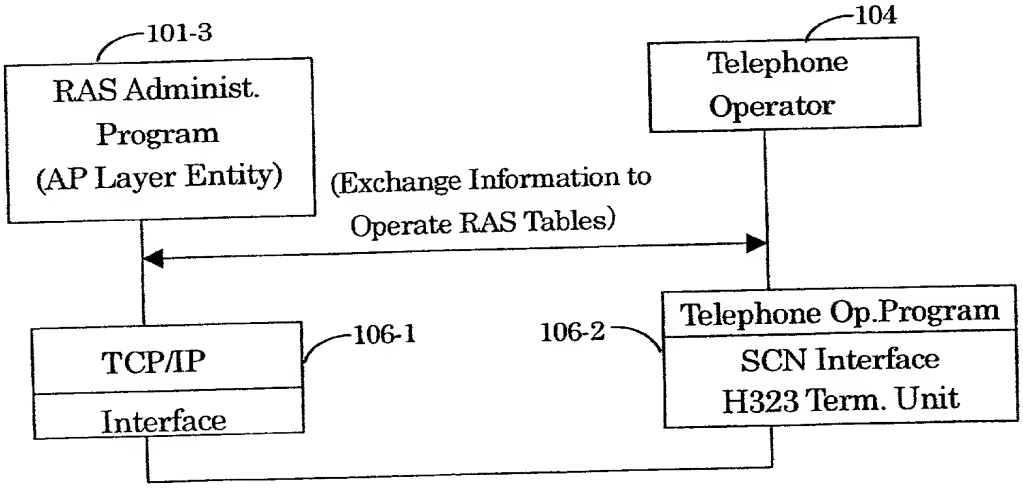


FIG.68

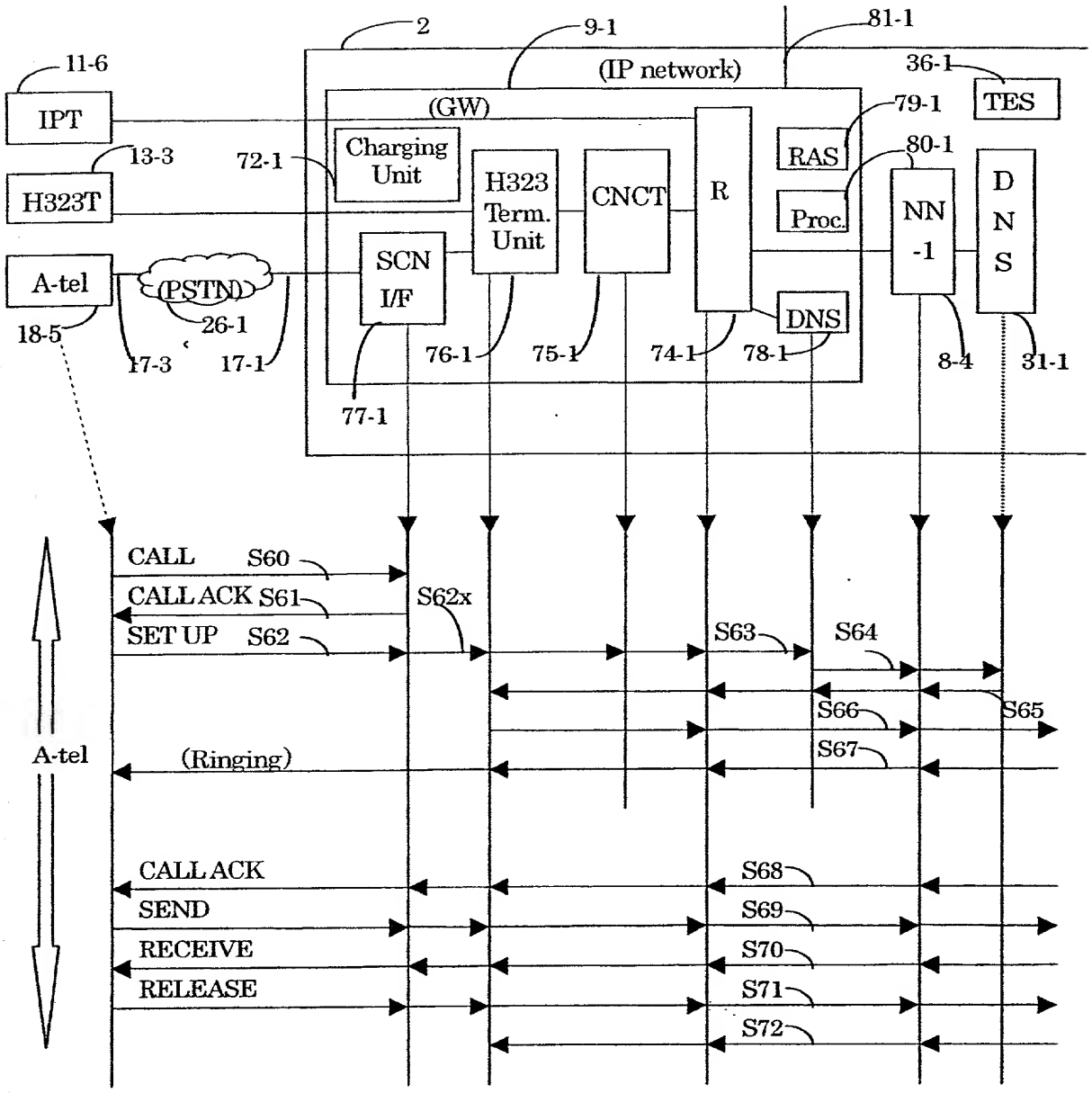

2
9-1
81-1
11-6
(IP network)
36-1
IPT
(GW)
TES
79-1
13-3
72-1
Charging Unit
H323 Term. Unit
CNCT
R
RAS
80-1
H323T
Proc.
NN -1
D N S
A-tel
SCN I/F
(PSTN)
DNS
26-1
18-5
17-3
17-1
76-1
75-1
74-1
78-1
8-4
31-1
77-1
CALL S60
CALL ACK S61
S62x
SET UP S62
S63
S64
S65
S66
S67
A-tel
(Ringing)
CALL ACK
S68
SEND
S69
RECEIVE
S70
RELEASE
S71
S72

FIG.69

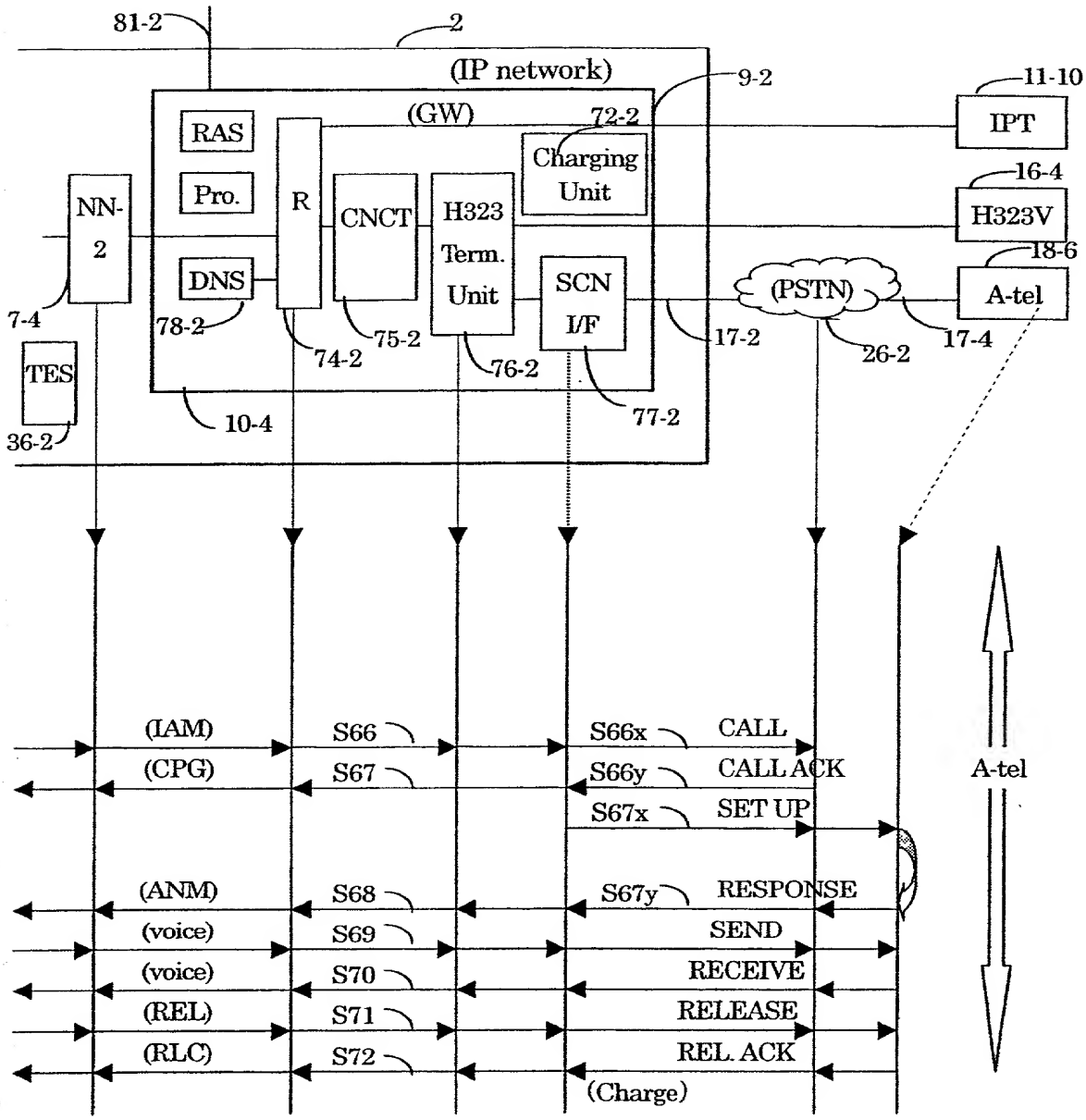

81-2
2
(IP network)
9-2
11-10
(GW)
72-2
RAS
Pro.
R
CNCT
H323
Term.
Unit
Charging
Unit
IPT
16-4
H323V
NN-
2
DNS
SCN
I/F
(PSTN)
18-6
A-tel
7-4
78-2
74-2
75-2
76-2
77-2
17-2
26-2
17-4
TES
36-2
10-4
(IAM)
S66
S66x
CALL
(CPG)
S67
S66y
CALL ACK
S67x
SET UP
A-tel
(ANM)
S68
S67y
RESPONSE
(voice)
S69
SEND
(voice)
S70
RECEIVE
(REL)
S71
RELEASE
(RLC)
S72
REL. ACK
(Charge)

FIG.70

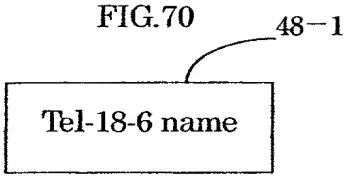


FIG.71

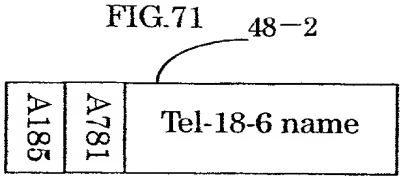


FIG.72

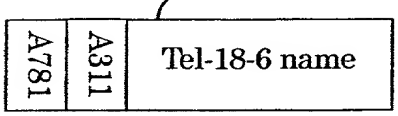


FIG.73

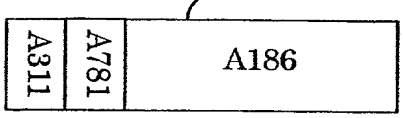


FIG.74

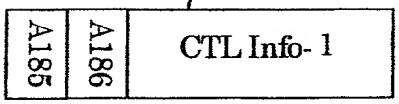


FIG.75

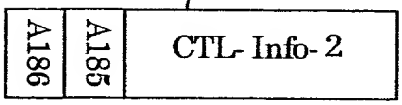


FIG.76

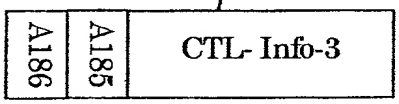


FIG.77

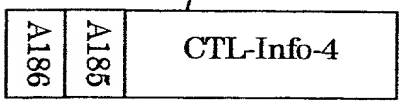


FIG.78

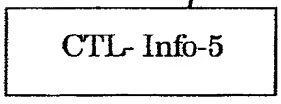


Fig.79

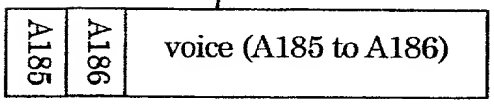


FIG.80

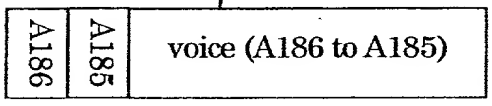


FIG.81

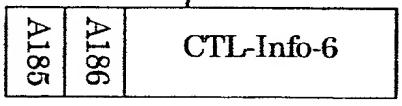


FIG.82

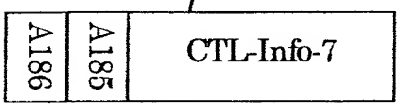


FIG.83

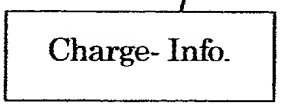


FIG.84

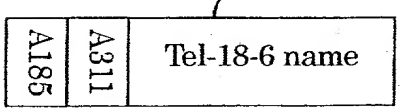


FIG.85

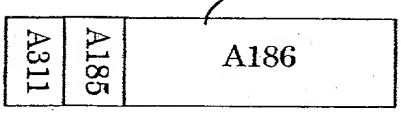


FIG.86

44 — 2

External IP Address	Com. Line Identification Symbol
A781	Line-17-1
A116	Line-17-1
A133	Line-17-1
A185	Line-17-1
. .	. .

FIG.87

100-2

Line Identifier	Telephone No. (Host Name)	Terminal IP Address	Kind of Terminal	Speed	Kind of Com. Line
1 7 − 1	81-3-9876-5432	100.101.102.103	A-tel	64kbps	ISDN
· ·	81-3-9876-5431	110.111.112.113	· ·	· ·	ISDN

FIG.88

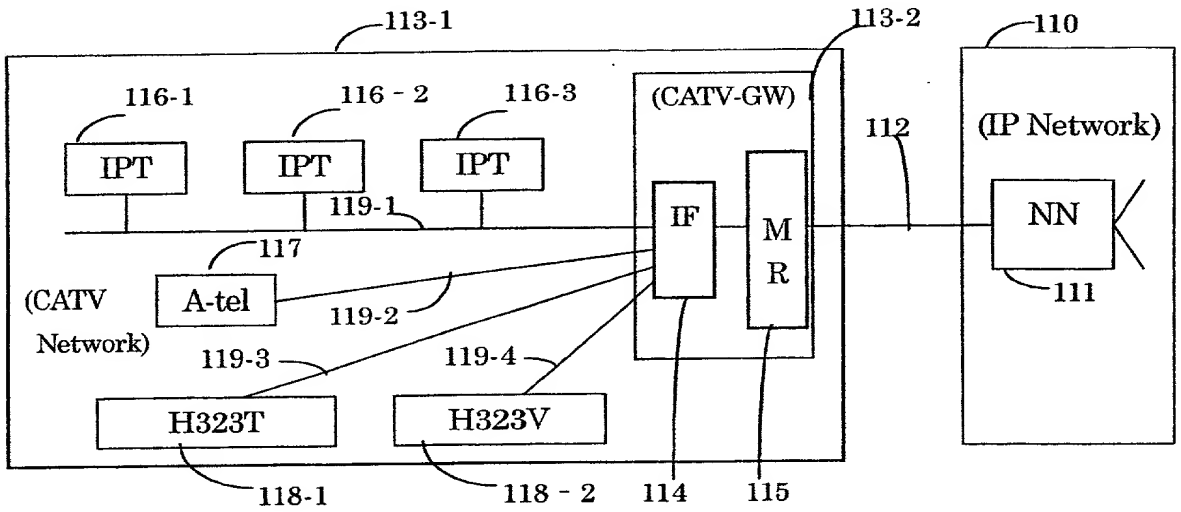


FIG.89

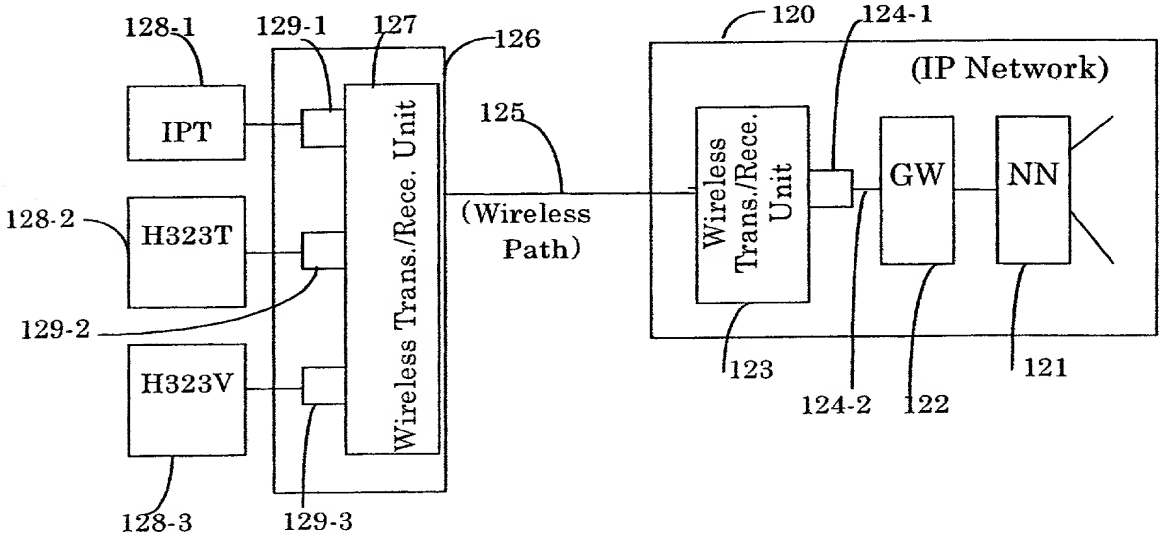


FIG.90

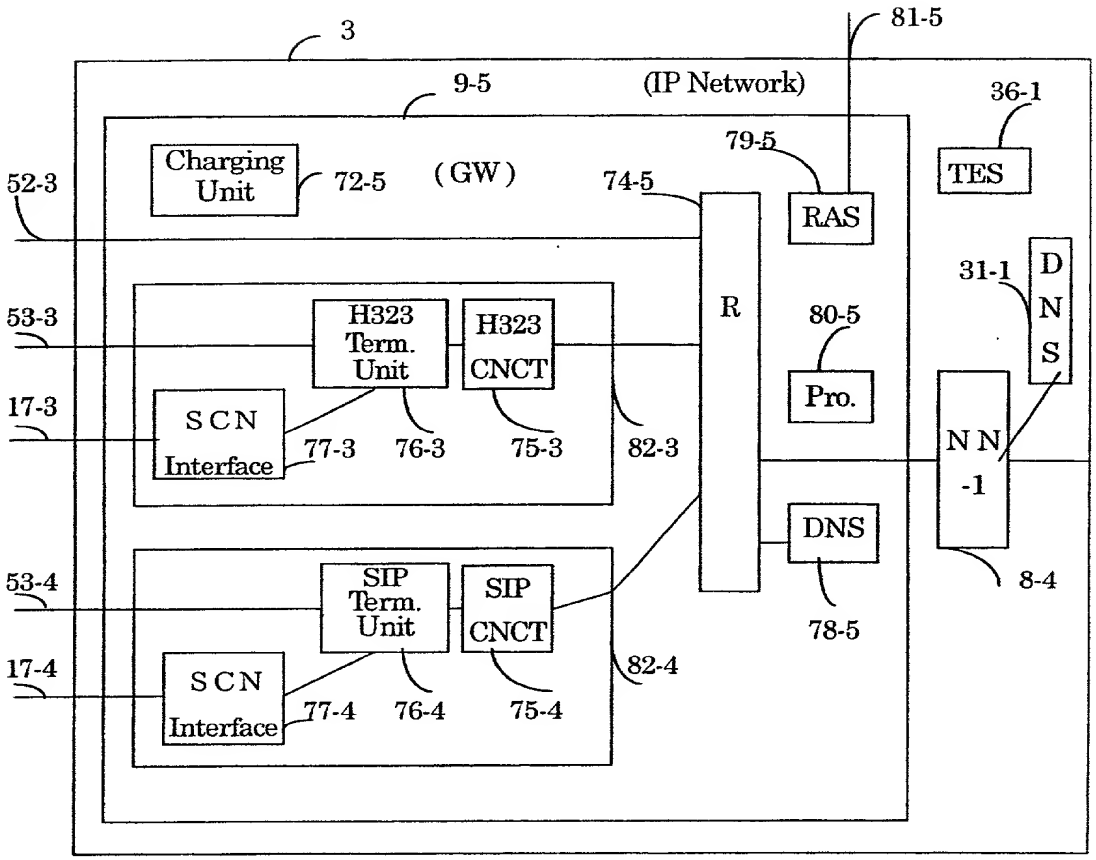
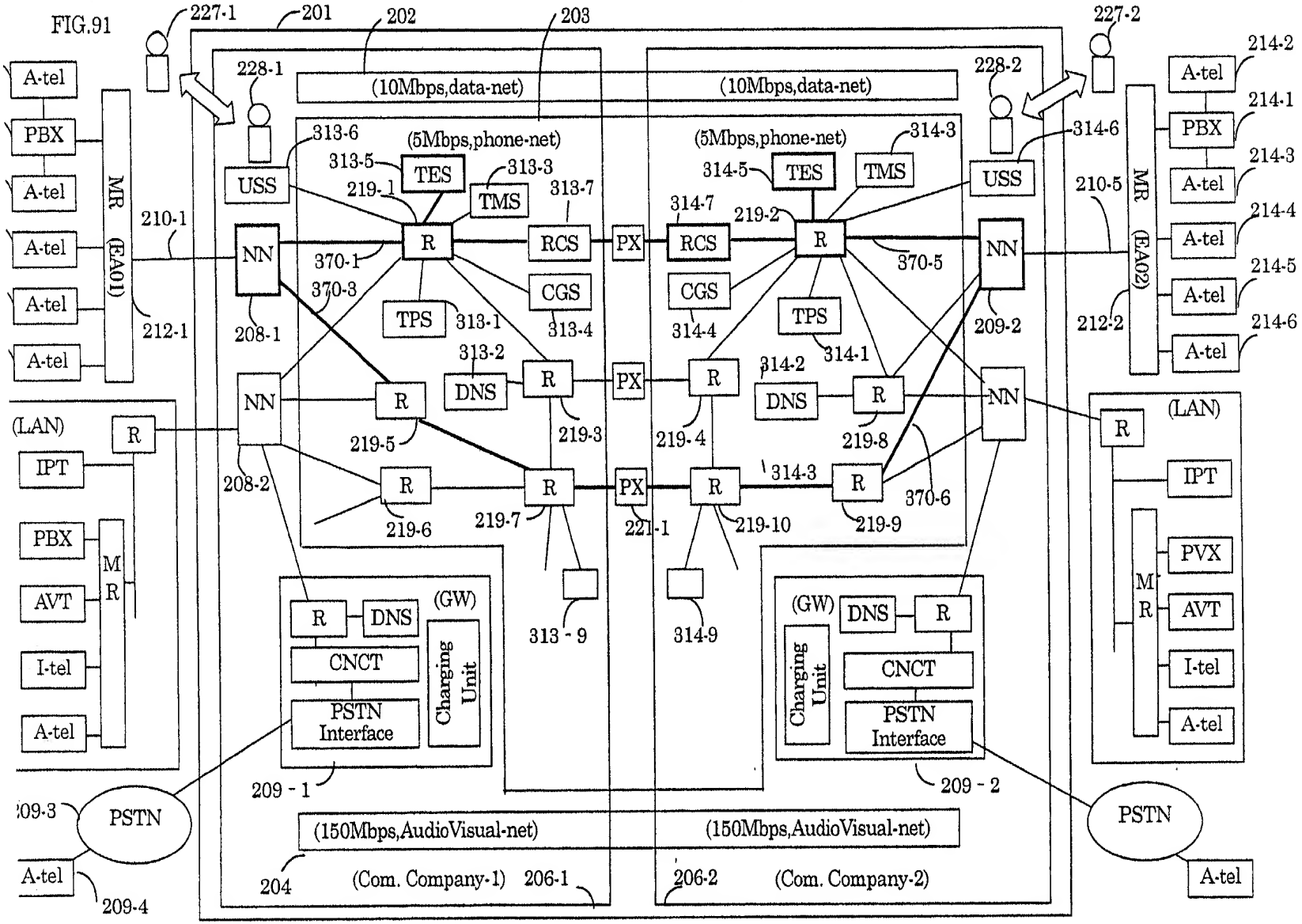

3
81-5
9-5
(IP Network)
36-1
Charging Unit
72-5
(GW)
79-5
TES
52-3
74-5
RAS
31-1
D N S
53-3
H323 Term. Unit
H323 CNCT
R
80-5
Pro.
17-3
S C N Interface
77-3
76-3
75-3
82-3
N N -1
DNS
53-4
SIP Term. Unit
SIP CNCT
8-4
17-4
S C N Interface
77-4
76-4
75-4
82-4
78-5

FIG.91


227-1
201
202
203
227-2
228-1
228-2
(10Mbps,data-net)
(10Mbps,data-net)
A-tel
PBX
A-tel
A-tel
A-tel
A-tel
MR (EA01)
210-1
212-1
USS
313-6
313-5
TES
313-3
TMS
313-7
219-1
(5Mbps,phone-net)
(5Mbps,phone-net)
314-5
TES
TMS
314-3
314-6
USS
MR (EA02)
210-5
212-2
214-2
214-1
214-3
214-4
214-5
214-6
NN
370-1
370-3
208-1
R
RCS
PX
RCS
314-7
219-2
R
370-5
NN
209-2
CGS
TPS
318-1
313-4
CGS
314-4
TPS
314-1
313-2
DNS
R
PX
R
314-2
DNS
R
NN
R
219-5
219-3
219-4
219-8
(LAN)
R
IPT
208-2
R
R
PX
R
314-3
R
370-6
219-6
219-7
221-1
219-10
219-9
PBX
AVT
I-tel
A-tel
M R
(GW)
R
DNS
CNCT
PSTN Interface
Charging Unit
313 - 9
314-9
(GW)
DNS
R
CNCT
PSTN Interface
Charging Unit
209 - 1
209 - 2
PVX
AVT
I-tel
A-tel
209-3
PSTN
A-tel
209-4
(150Mbps,AudioVisual-net)
(150Mbps,AudioVisual-net)
204
(Com. Company-1)
206-1
206-2
(Com. Company-2)
PSTN
A-tel

JP2280'2982/28860

FIG.92

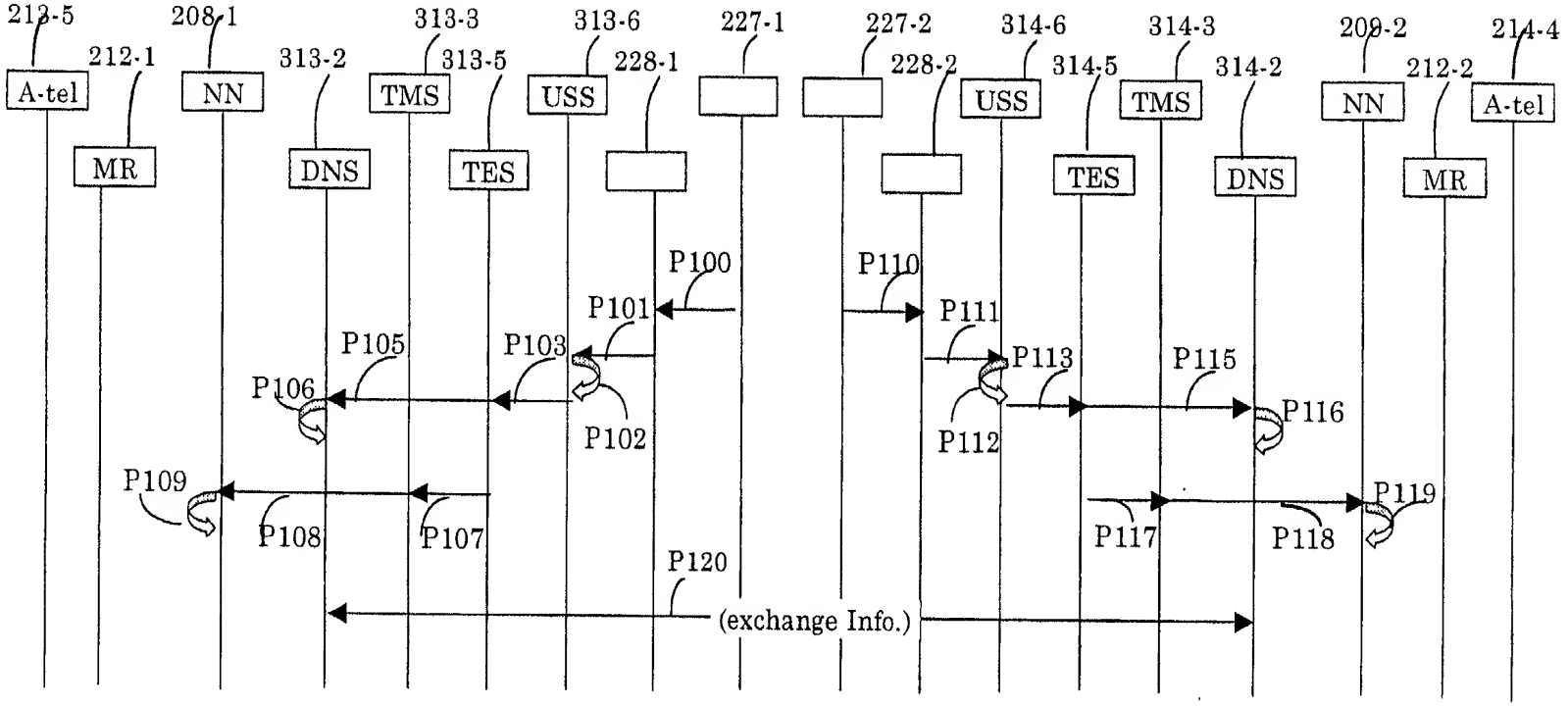


FIG.93

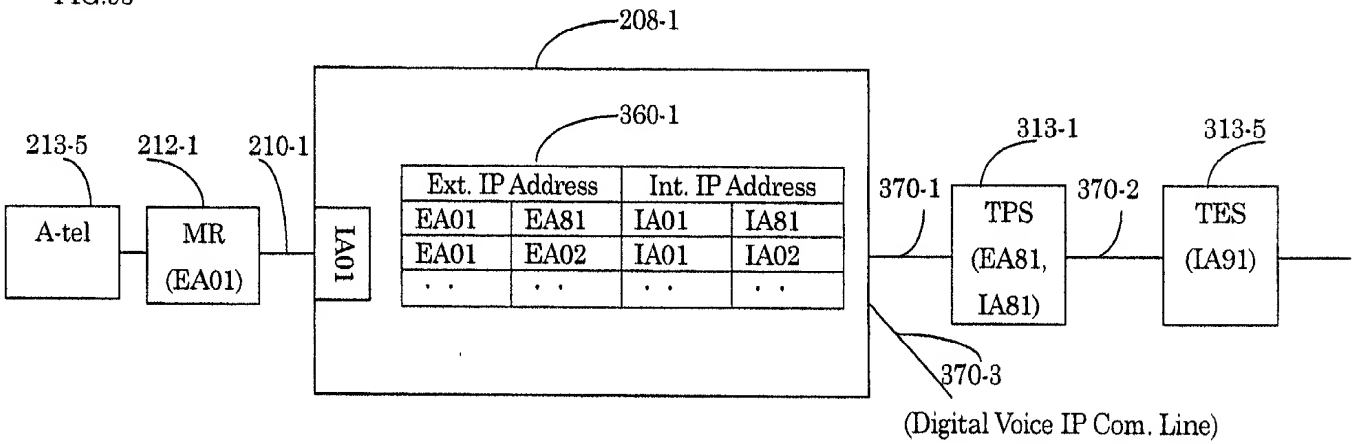

208-1
360-1
213-5
212-1
210-1
A-tel
MR
(EA01)
IA01
Ext. IP Address
Int. IP Address
EA01
EA81
IA01
IA81
EA01
EA02
IA01
IA02
370-1
313-1
313-5
370-2
TPS
(EA81,
IA81)
TES
(IA91)
370-3
(Digital Voice IP Com. Line)

FIG.94

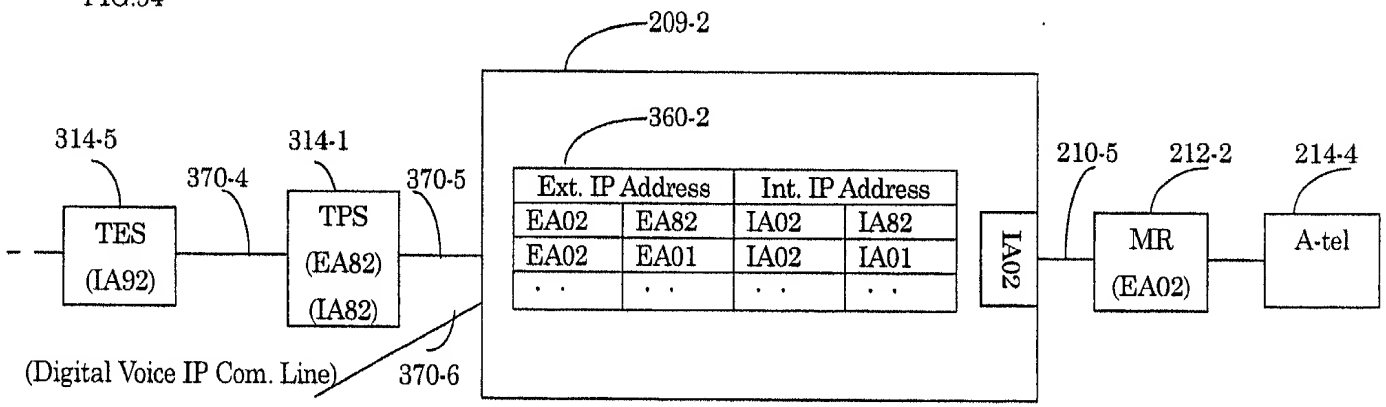

209-2
360-2
314-5
314-1
370-4
370-5
TES
(IA92)
TPS
(EA82)
(IA82)
Ext. IP Address
Int. IP Address
EA02
EA82
IA02
IA82
EA02
EA01
IA02
IA01
210-5
212-2
214-4
IA02
MR
(EA02)
A-tel
(Digital Voice IP Com. Line)
370-6

FIG.95

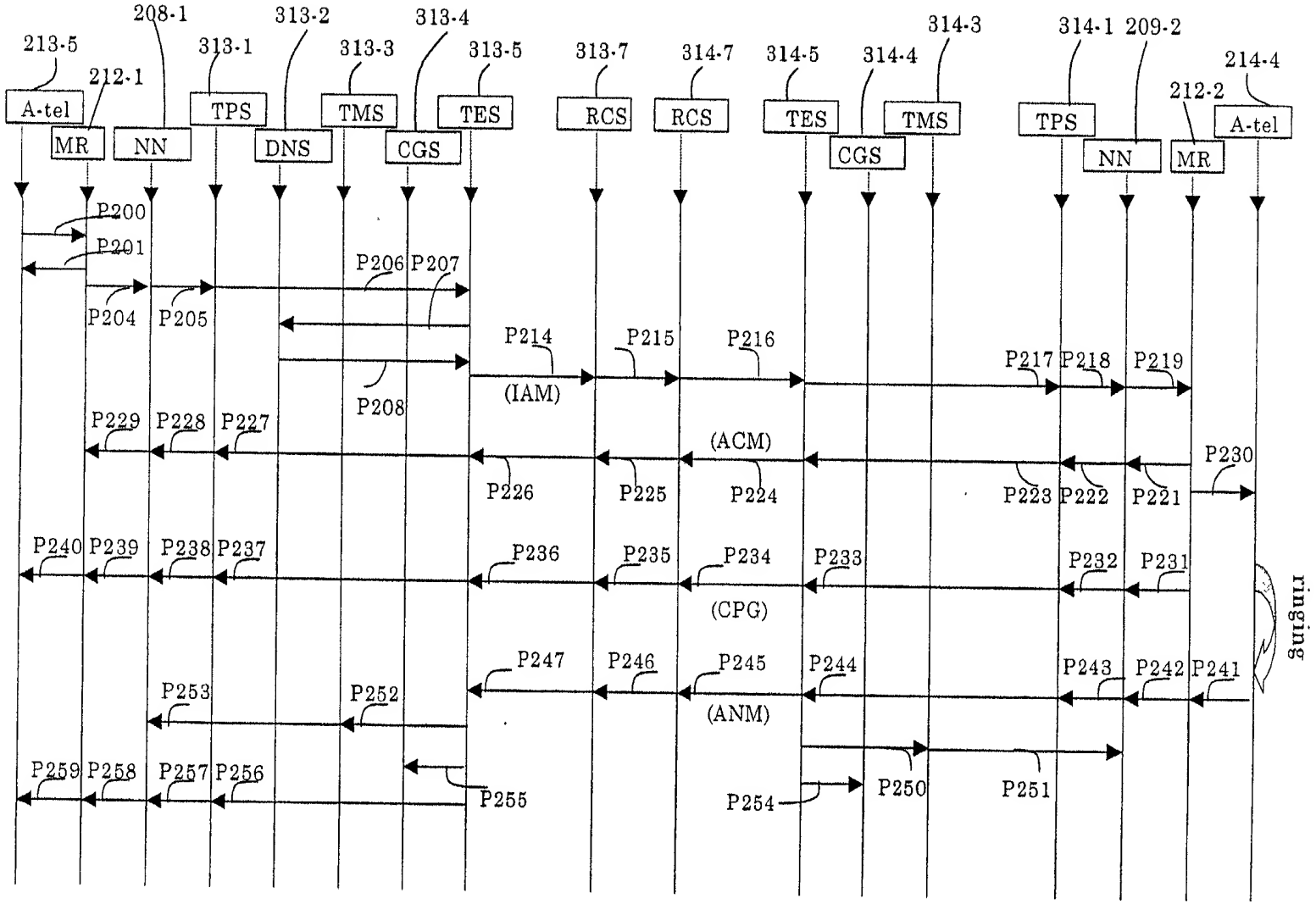

213-5
A-tel
212-1
MR
208-1
NN
313-1
TPS
313-2
DNS
313-3
TMS
313-4
CGS
313-5
TES
313-7
RCS
314-7
RCS
314-5
TES
314-4
CGS
314-3
TMS
314-1
TPS
209-2
NN
212-2
MR
214-4
A-tel
P200
P201
P204
P205
P206
P207
P208
P214
(IAM)
P215
P216
P217
P218
P219
P229
P228
P227
P226
P225
(ACM)
P224
P223
P222
P221
P230
P240
P239
P238
P237
P236
P235
P234
(CPG)
P233
P232
P231
ringing
P247
P246
P245
(ANM)
P244
P243
P242
P241
P253
P252
P255
P254
P250
P251
P259
P258
P257
P256

FIG.96

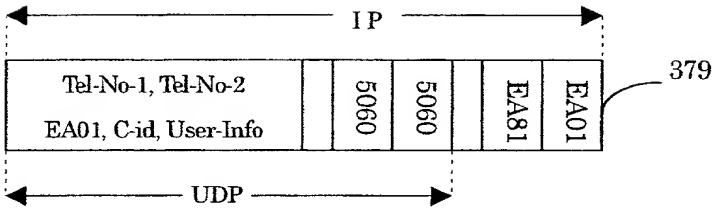


FIG.97

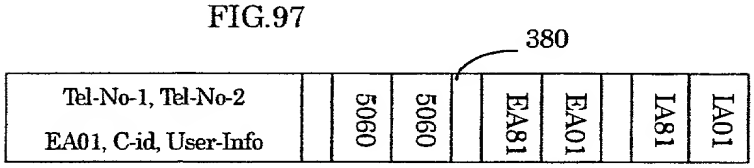


FIG.98

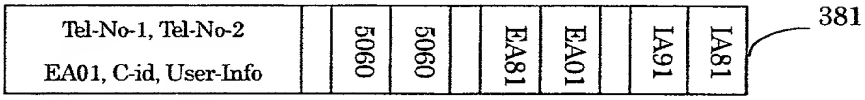


FIG.99

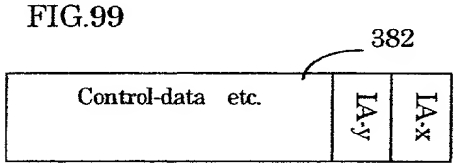


FIG.100

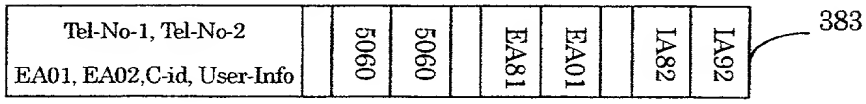


FIG.101

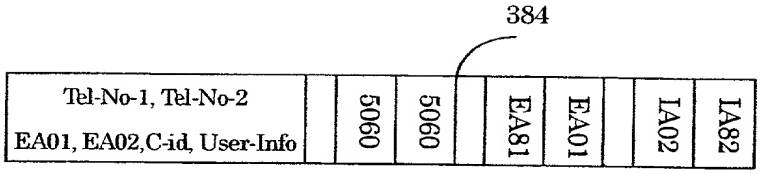


FIG.102

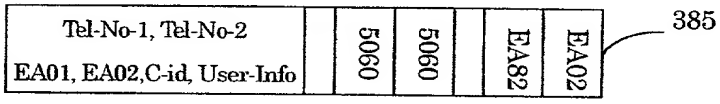


FIG.103

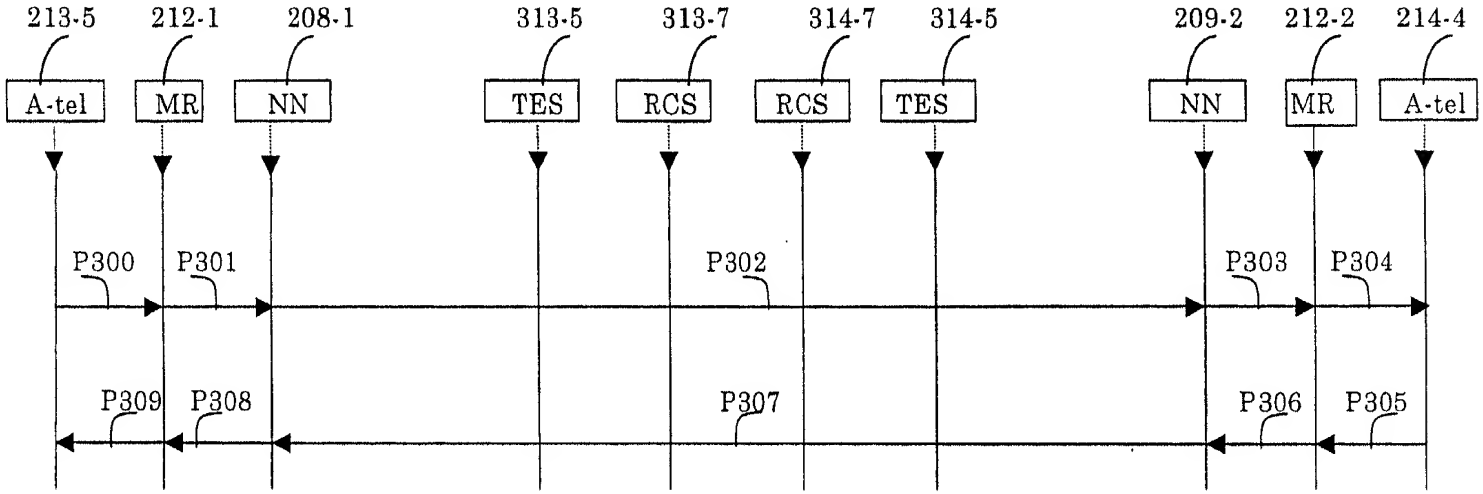

213-5
212-1
208-1
313-5
313-7
314-7
314-5
209-2
212-2
214-4
A-tel
MR
NN
TES
RCS
RCS
TES
NN
MR
A-tel
P300
P301
P302
P303
P304
P309
P308
P307
P306
P305

FIG.104

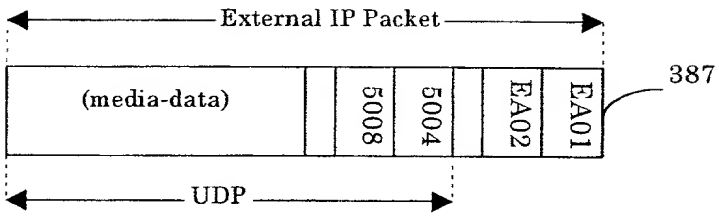


FIG.105

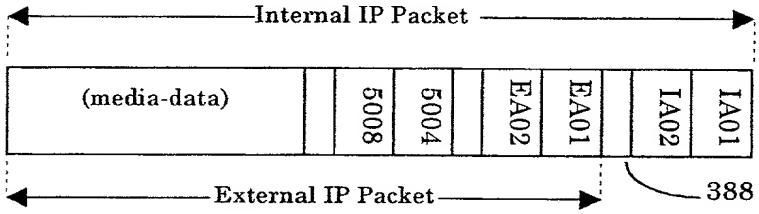
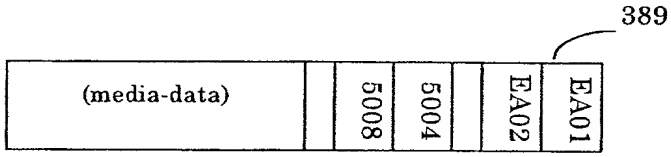
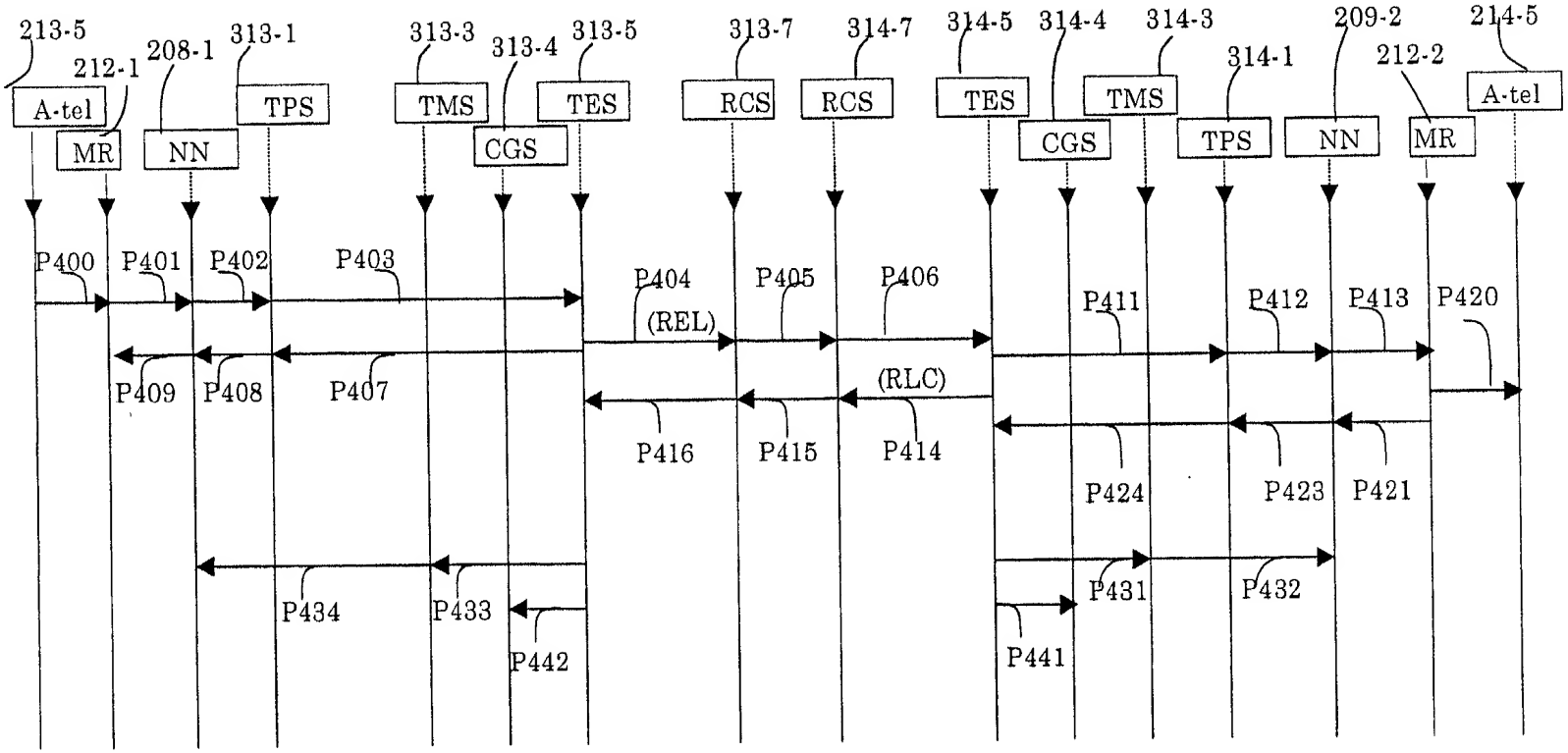


FIG.106



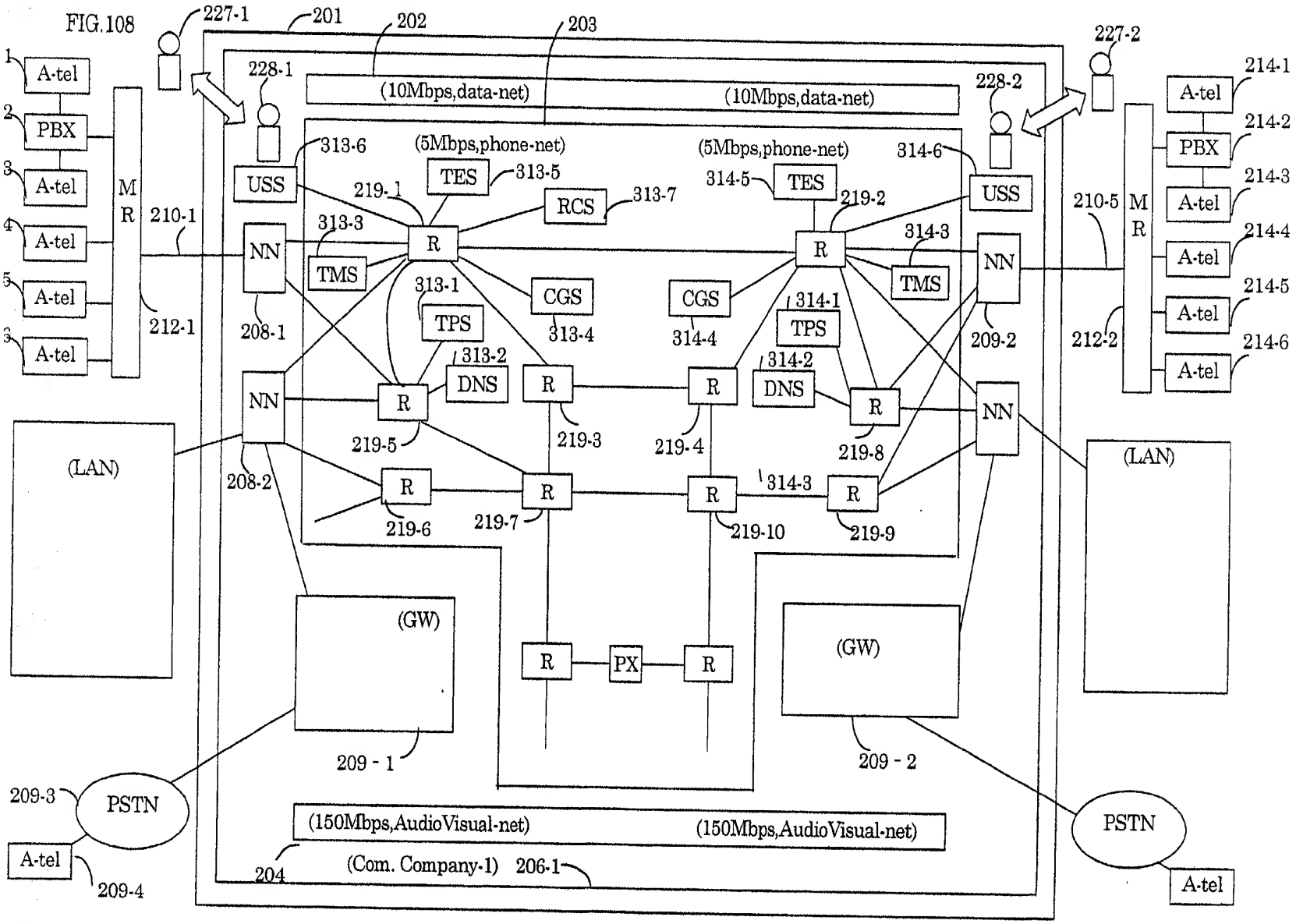
JP2000-299860

FIG.107



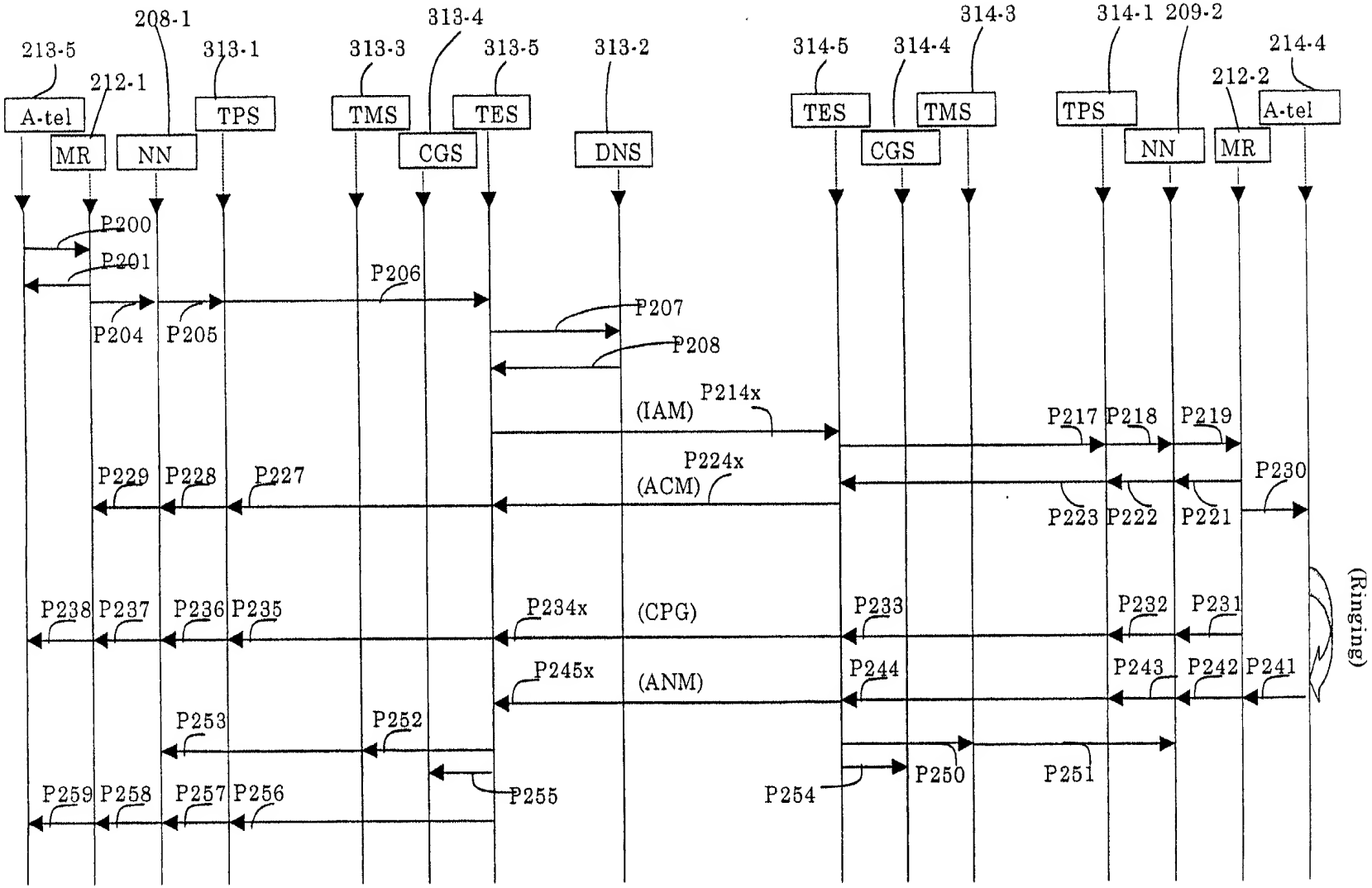
TOZ280 "2922860

FIG.108



JP2004-282660

FIG.109



TO/2807/2822860

FIG.110

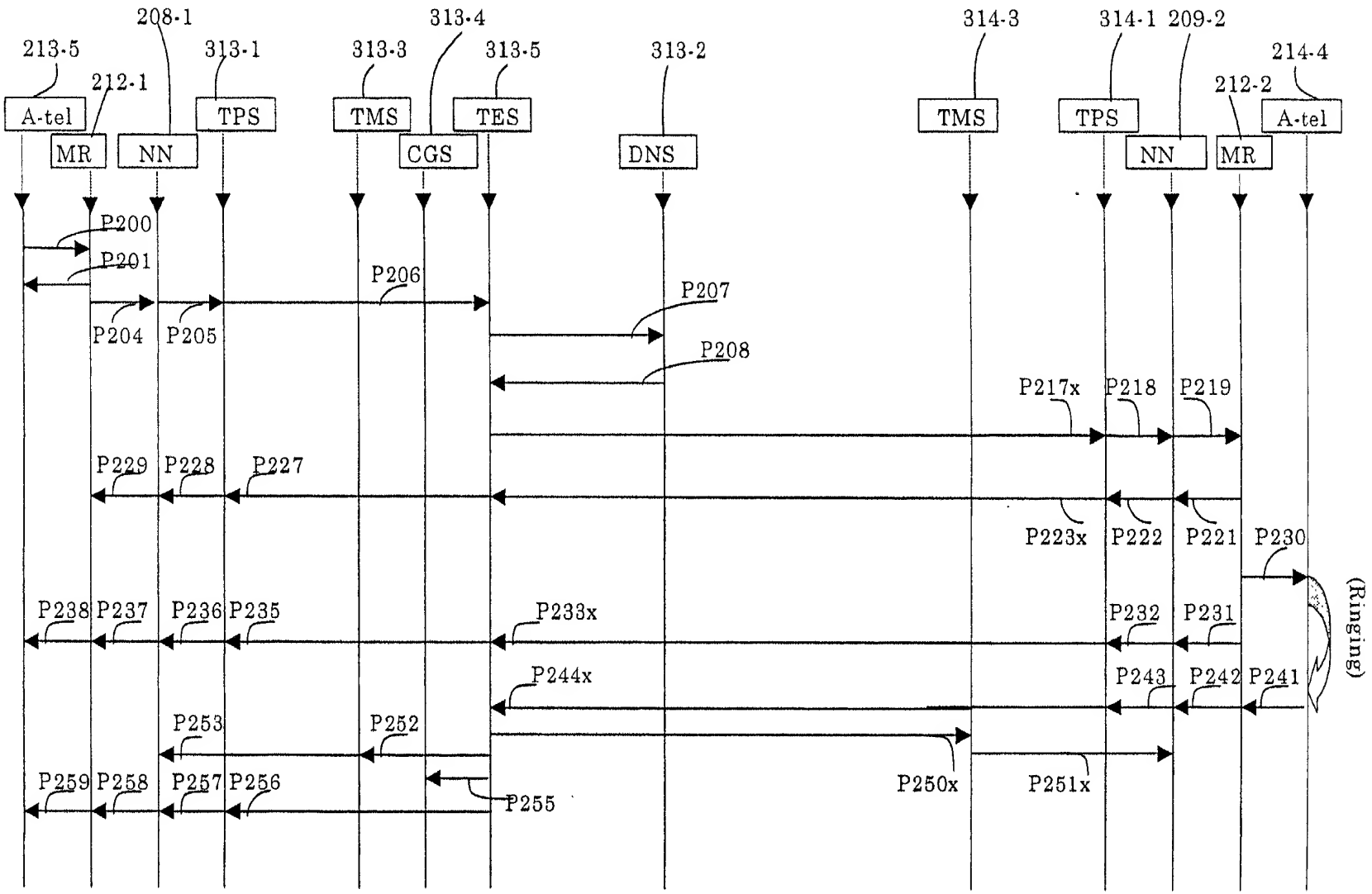


FIG.111

No.	Telephone No.	Own Com. ?	Iden. Information of Another Company
1	81-3-5414-xxxx	No.	Com-130
2	1-2245-5678	No.	Com-025
3	81-47-325-3887	Yes	
4	81-2245-56xx	Yes	
· ·	81-6-1234- xxxx	Yes	
n	1-2345-2345	No	Com-840

FIG.112

No.	Telephone No.	Operated by This TES ? (Own Company)	Iden. Inform.of Another TES (Own Company)
1	81-47-325-3887	Yes	
2	81-2245-56xx	No.	100.10.11.40
3	81-6-1234- xxxx	Yes	
· ·			
m	1-2345-2345	No	100.10.11.70

JP 2004-282680 A 2004.10.07

FIG.113

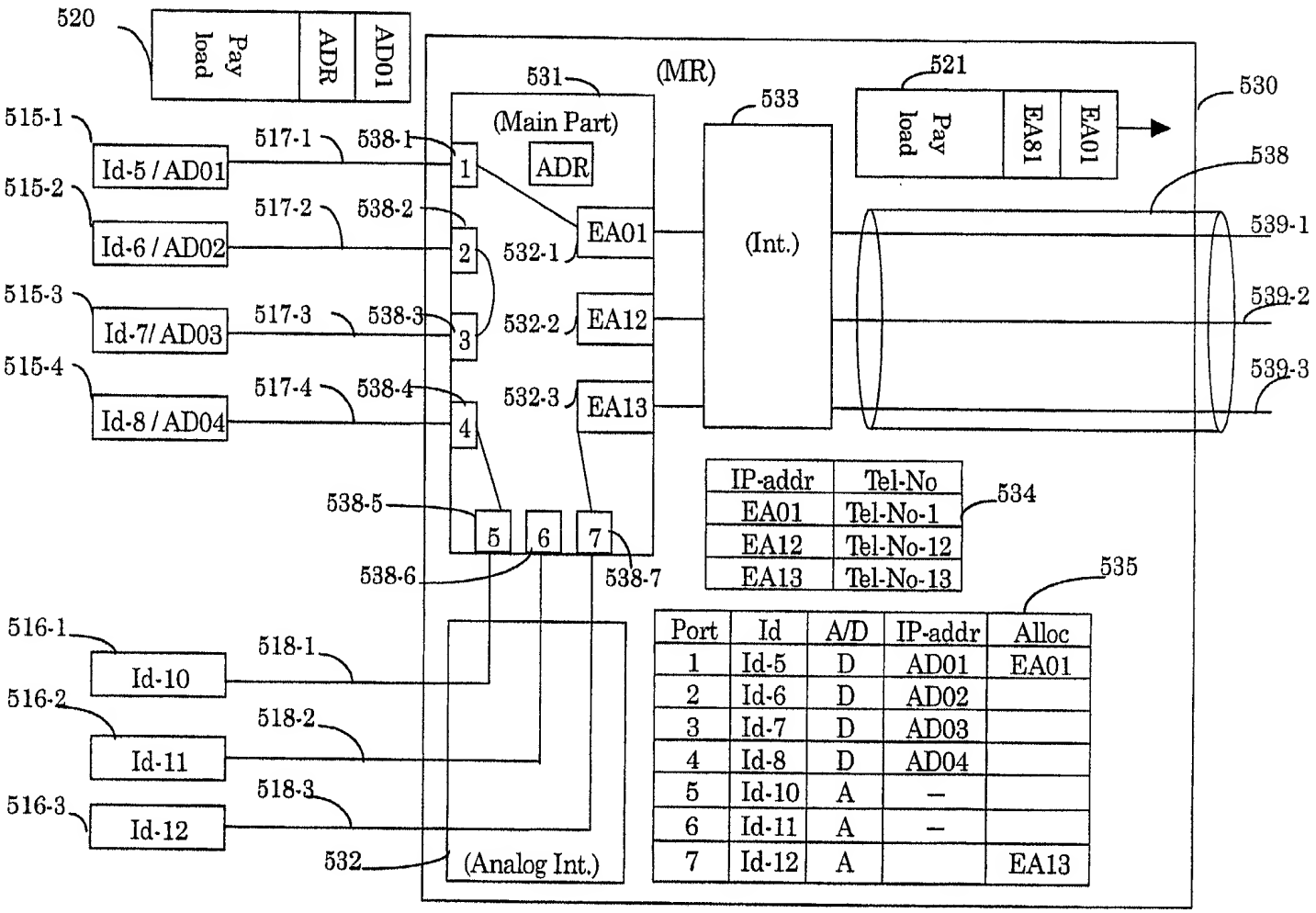


FIG.114

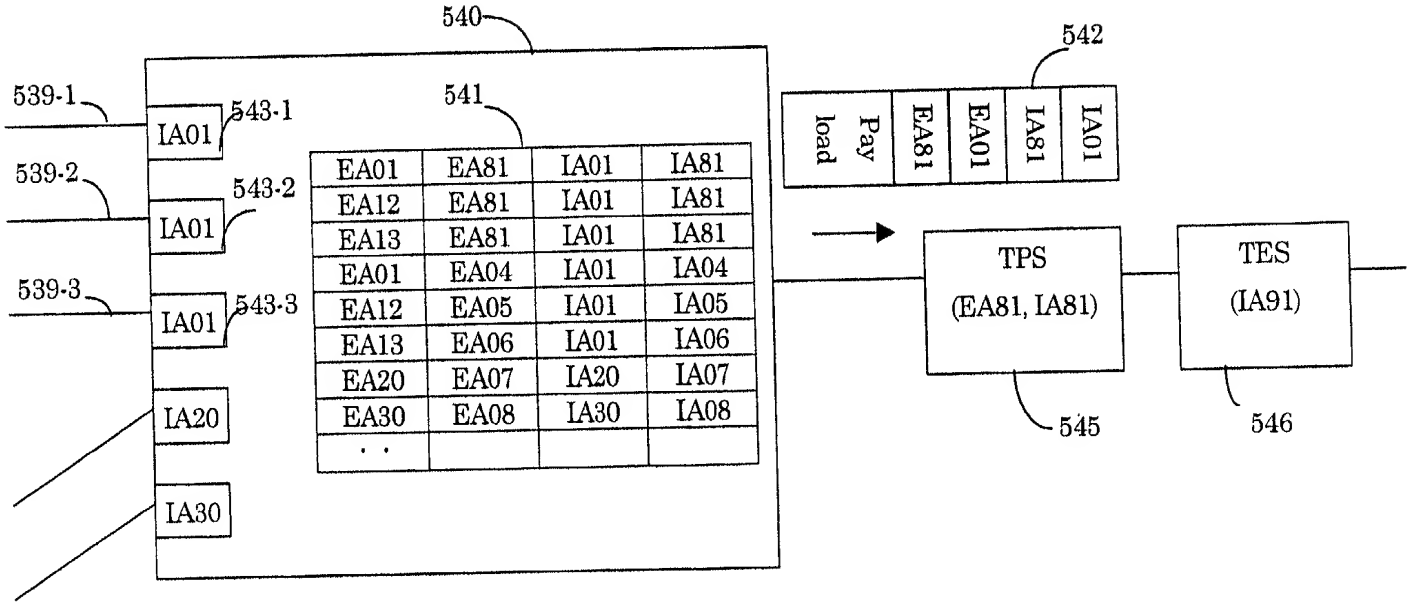

540
539-1
539-2
539-3
IA01
IA01
IA01
IA20
IA30
543-1
543-2
543-3
541
EA01 EA81 IA01 IA81
EA12 EA81 IA01 IA81
EA13 EA81 IA01 IA81
EA01 EA04 IA01 IA04
EA12 EA05 IA01 IA05
EA13 EA06 IA01 IA06
EA20 EA07 IA20 IA07
EA30 EA08 IA30 IA08
542
Pay load
EA81
EA01
IA81
IA01
TPS
(EA81, IA81)
TES
(IA91)
545
546

FIG.115

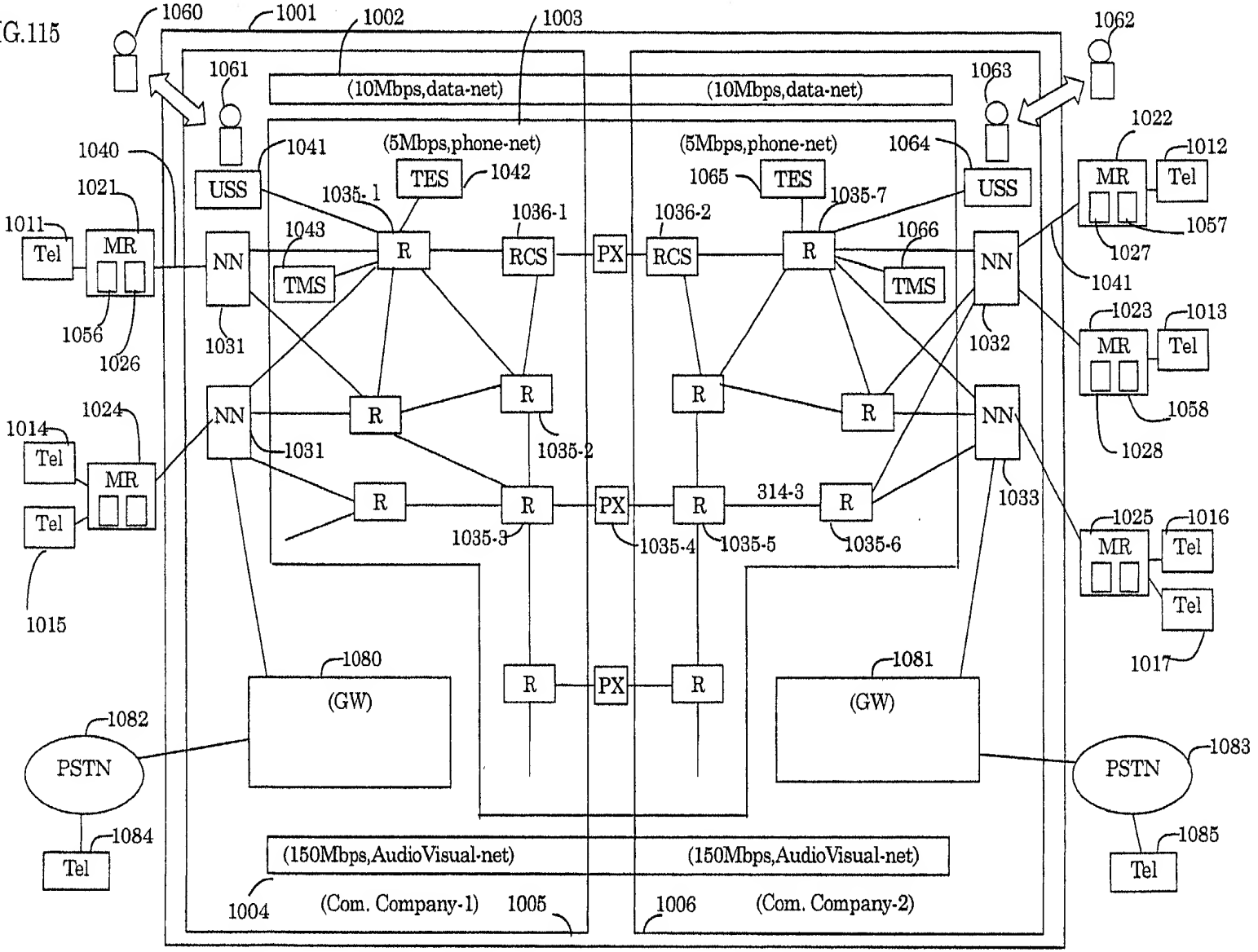

1060
1001
1002
1003
1062
1061
(10Mbps,data-net)
(10Mbps,data-net)
1063
1022
1040
1041
(5Mbps,phone-net)
(5Mbps,phone-net)
1064
1012
1021
USS
TES
1042
1065
TES
1035-7
USS
MR
Tel
1011
1035-1
1036-1
1036-2
1066
1057
Tel
MR
NN
1043
R
RCS
PX
RCS
R
NN
1027
1041
TMS
TMS
1023
1013
1056
1031
1032
MR
Tel
1026
1024
1058
NN
R
R
R
R
NN
1014
1031
1035-2
1028
Tel
MR
R
R
314-3
R
1033
1025
1016
Tel
1035-3
1035-4
1035-5
1035-6
MR
Tel
1015
Tel
1017
1080
1081
R
PX
R
(GW)
(GW)
1082
PSTN
1083
PSTN
1084
1085
Tel
Tel
(150Mbps,AudioVisual-net)
(150Mbps,AudioVisual-net)
1004
(Com. Company-1)
1005
1006
(Com. Company-2)

FIG.116

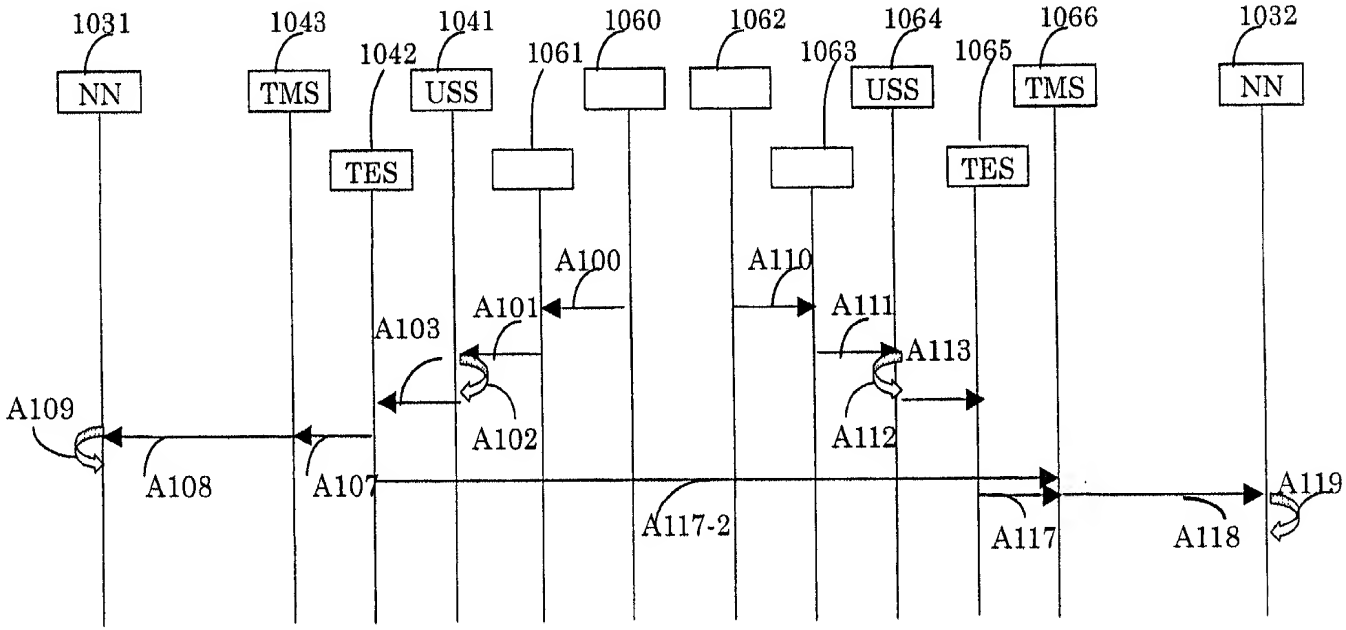

1031
NN
1043
TMS
1042
TES
1041
USS
1061
1060
1062
1063
1064
USS
1065
TES
1066
TMS
1032
NN
A100
A101
A102
A103
A107
A108
A109
A110
A111
A112
A113
A117
A117-2
A118
A119

FIG.117

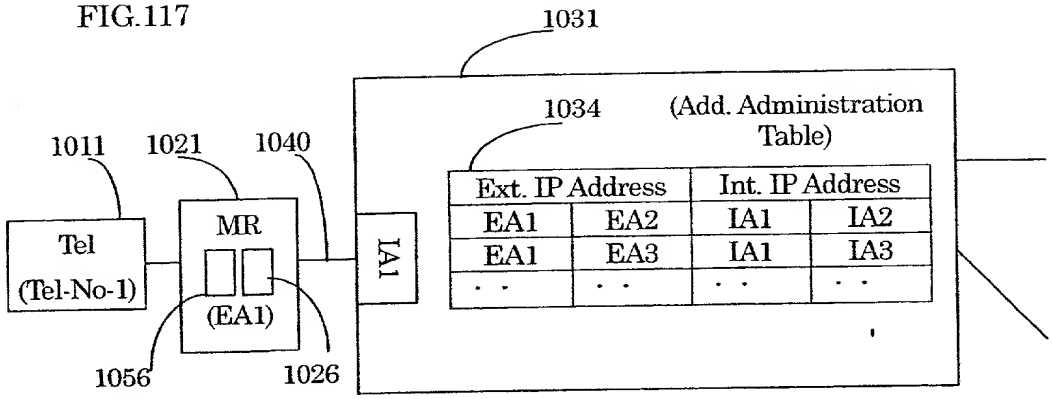


FIG.118

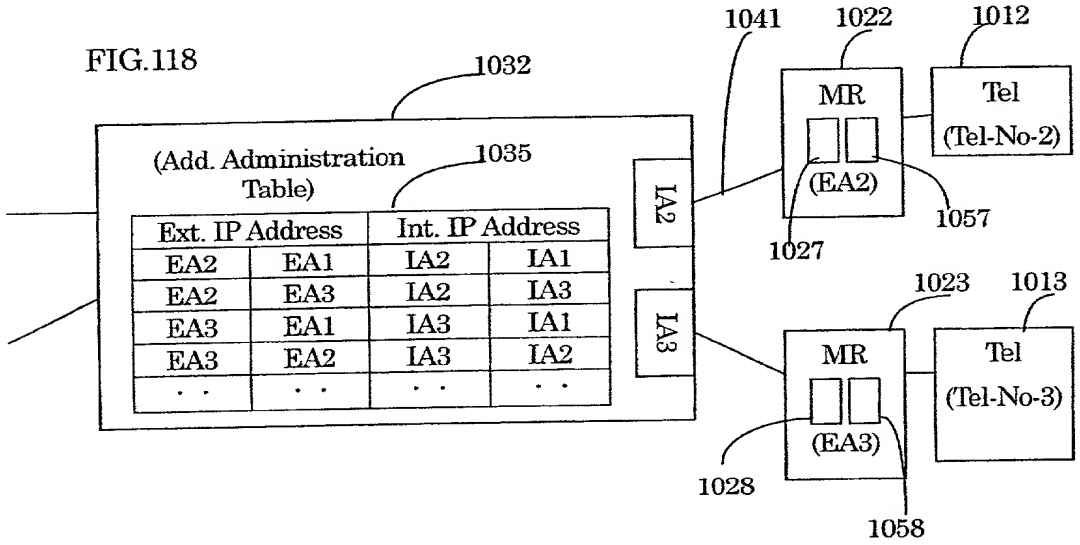


FIG.119

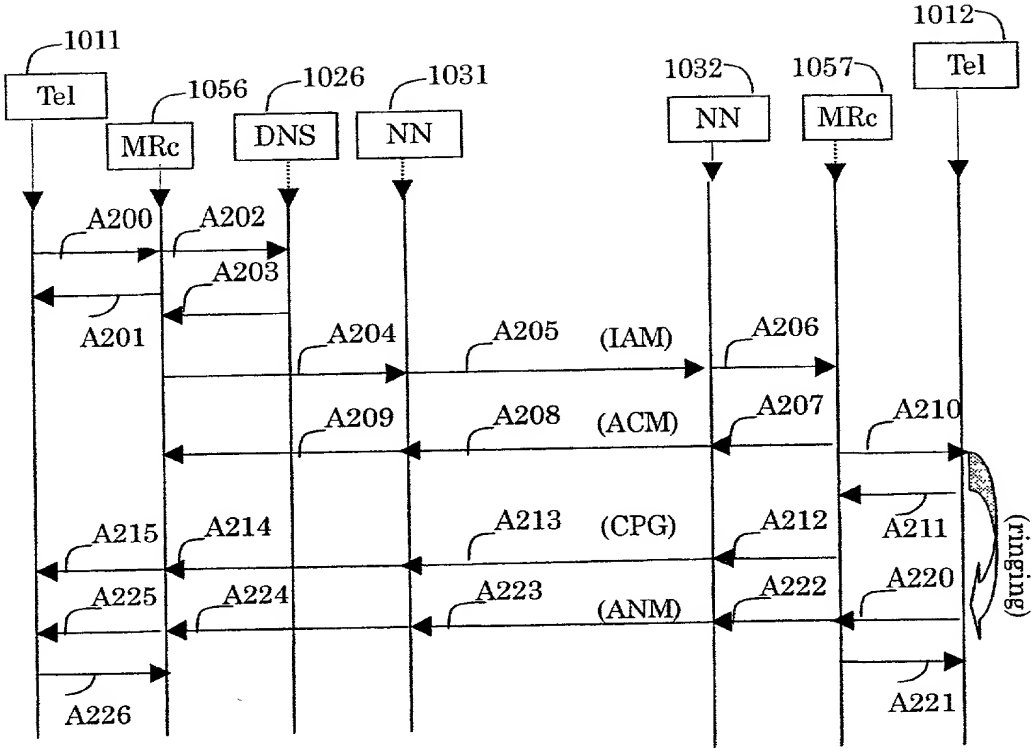

1011
Tel
1056
MRc
1026
DNS
1031
NN
1032
NN
1057
MRc
1012
Tel
A200
A202
A203
A201
A204
A205
(IAM)
A206
A209
A208
(ACM)
A207
A210
A211
(ringing)
A215
A214
A213
(CPG)
A212
A225
A224
A223
(ANM)
A222
A220
A226
A221

FIG.120

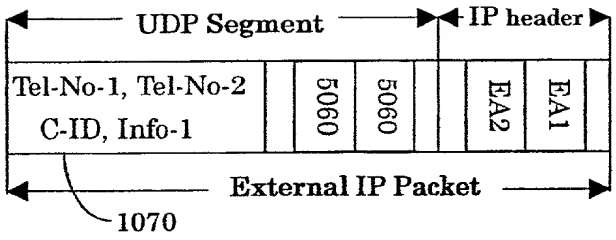


FIG.121

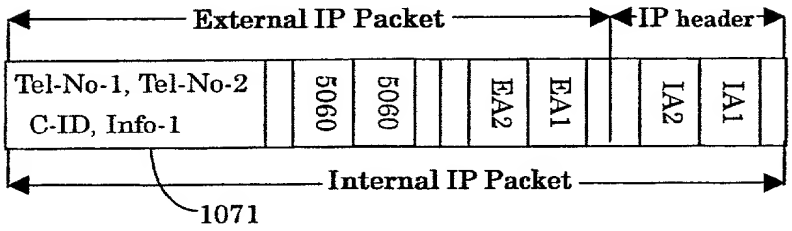


FIG.122

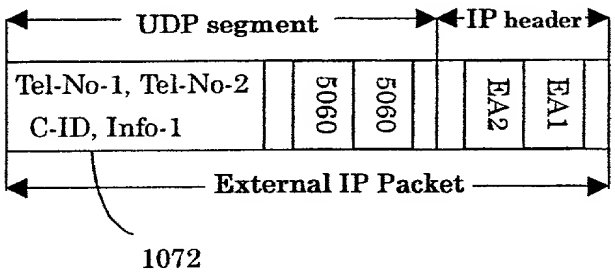


FIG.123

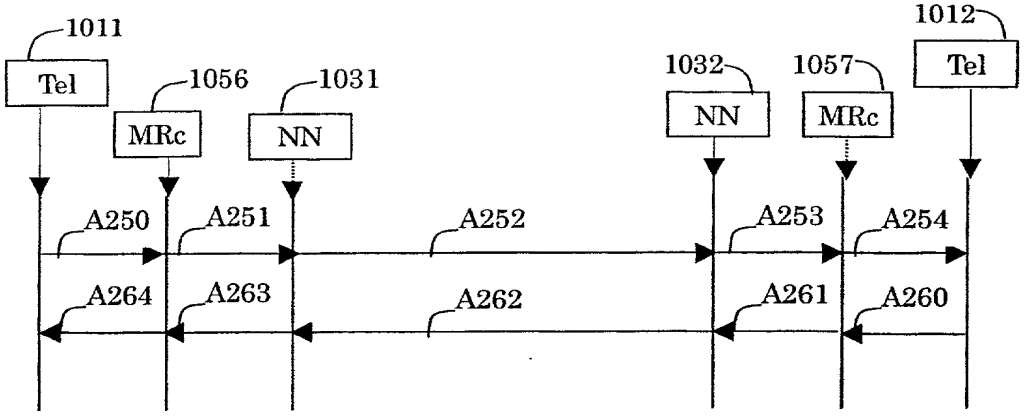


FIG.124

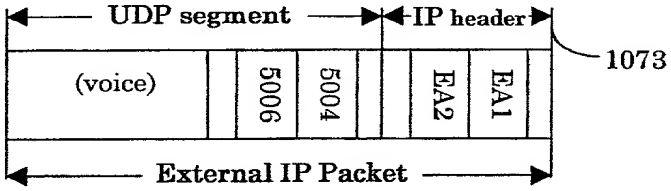


FIG.125

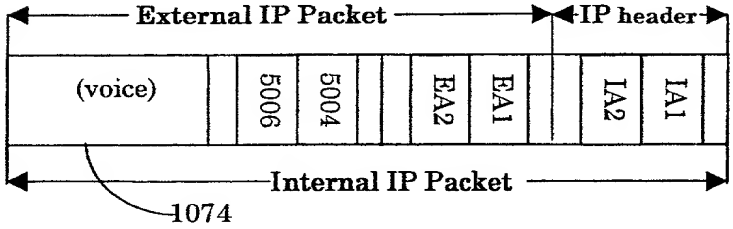


FIG.126

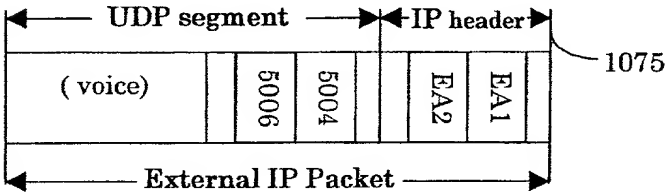


FIG.127

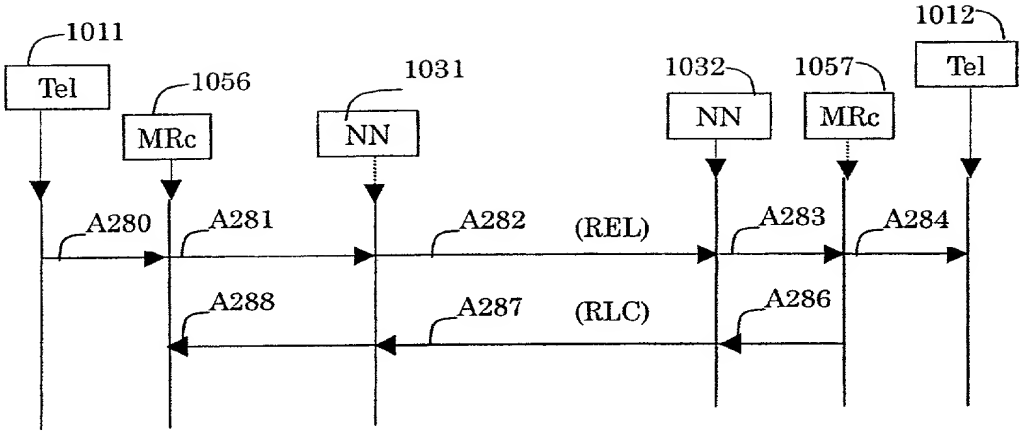


FIG.128

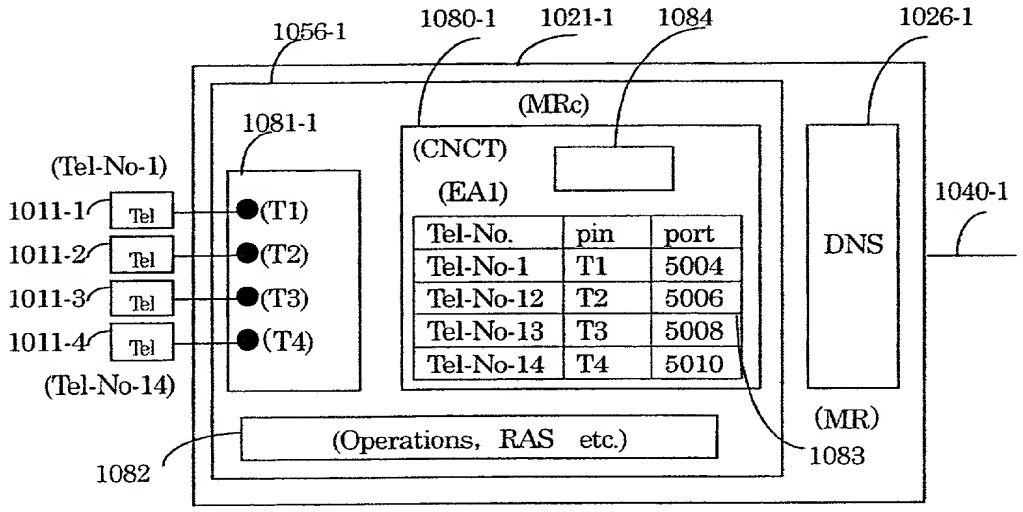


FIG.129

1083-1

Tel-No.	pin	port
Tel-No-1	T1	5004
Tel-No-1	T2	5006
Tel-No-1	T3	5008
Tel-No-1	T4	5010

FIG.130

1083-2

Tel-No.	pin	port
Tel-No-1	T1	
Tel-No-12	T2	5004
Tel-No-13	T3	
Tel-No-14	T4	

FIG.131

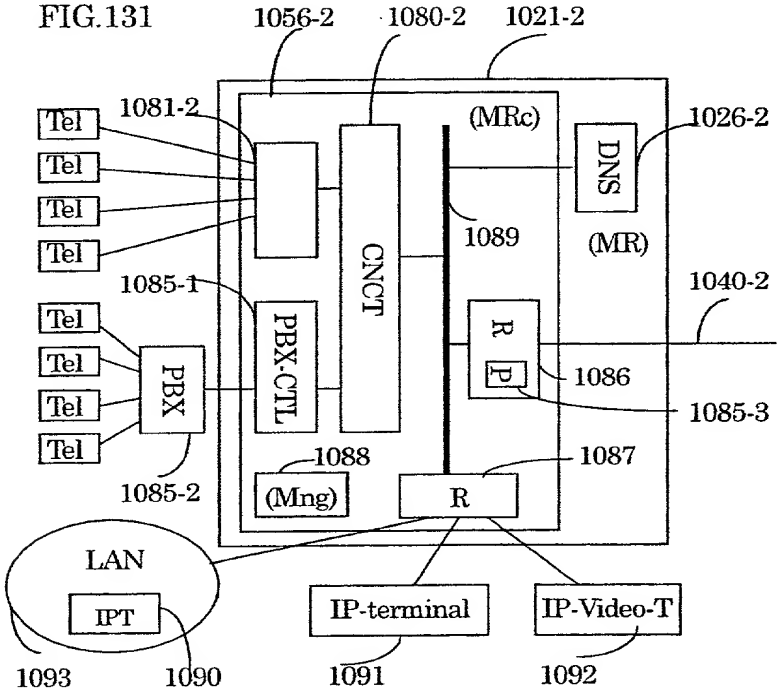


FIG.132

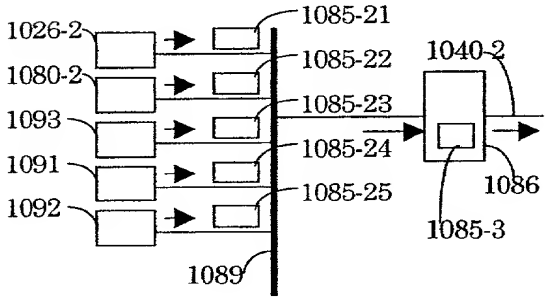


FIG.133

1085-3

(priority)	(port-No.)
2 (high)	108
1	5060, 5004 to 5020
0	others

FIG.134

1085-4

(priority)	(IP address－port No.)
2 (high)	150.1.2.3 －108
1	192.1.2.3－5060, 192.1.2.3－(5004 to 5020)
0	others

FIG.135

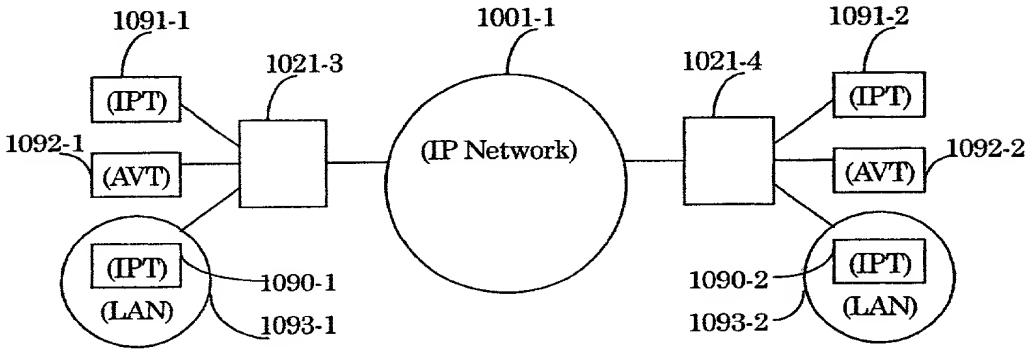


FIG.136

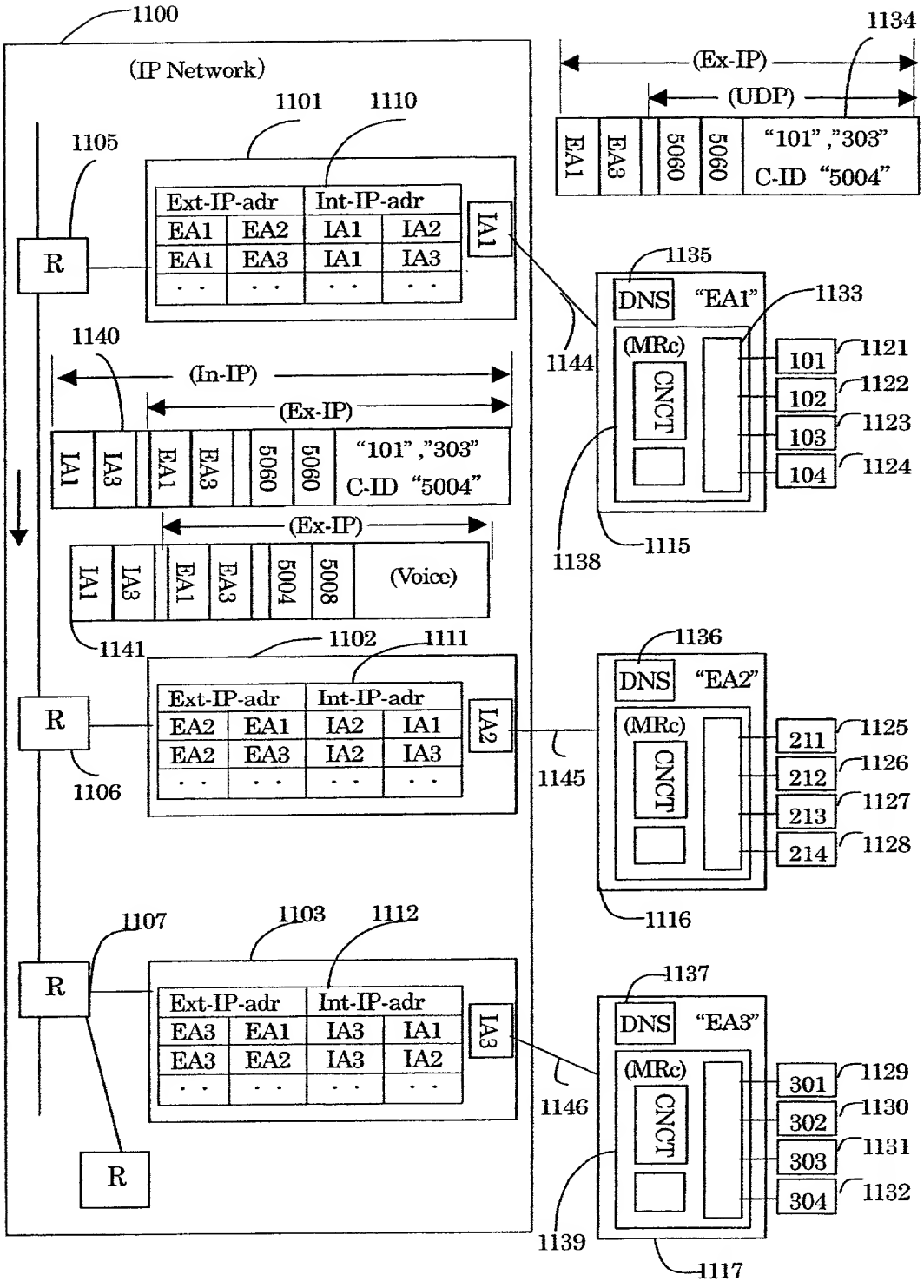

1100
(IP Network)
1101
1110
1105
Ext-IP-adr
Int-IP-adr
EA1 EA2 IA1 IA2
EA1 EA3 IA1 IA3
IA1
R
1140
(In-IP)
(Ex-IP)
IA1 IA3 EA1 EA3 5060 5060 "101","303" C-ID "5004"
(Ex-IP)
IA1 IA3 EA1 EA3 5004 5008 (Voice)
1141
1102
1111
Ext-IP-adr
Int-IP-adr
EA2 EA1 IA2 IA1
EA2 EA3 IA2 IA3
IA2
R
1106
1107
1103
1112
Ext-IP-adr
Int-IP-adr
EA3 EA1 IA3 IA1
EA3 EA2 IA3 IA2
IA3
R
1134
(Ex-IP)
(UDP)
EA1 EA3 5060 5060 "101","303" C-ID "5004"
1135
DNS "EA1"
1133
(MRc)
CNCT
101 102 103 104
1121 1122 1123 1124
1144
1138
1115
1136
DNS "EA2"
(MRc)
CNCT
211 212 213 214
1125 1126 1127 1128
1145
1116
1137
DNS "EA3"
(MRc)
CNCT
301 302 303 304
1129 1130 1131 1132
1146
1139
1117

FIG.137

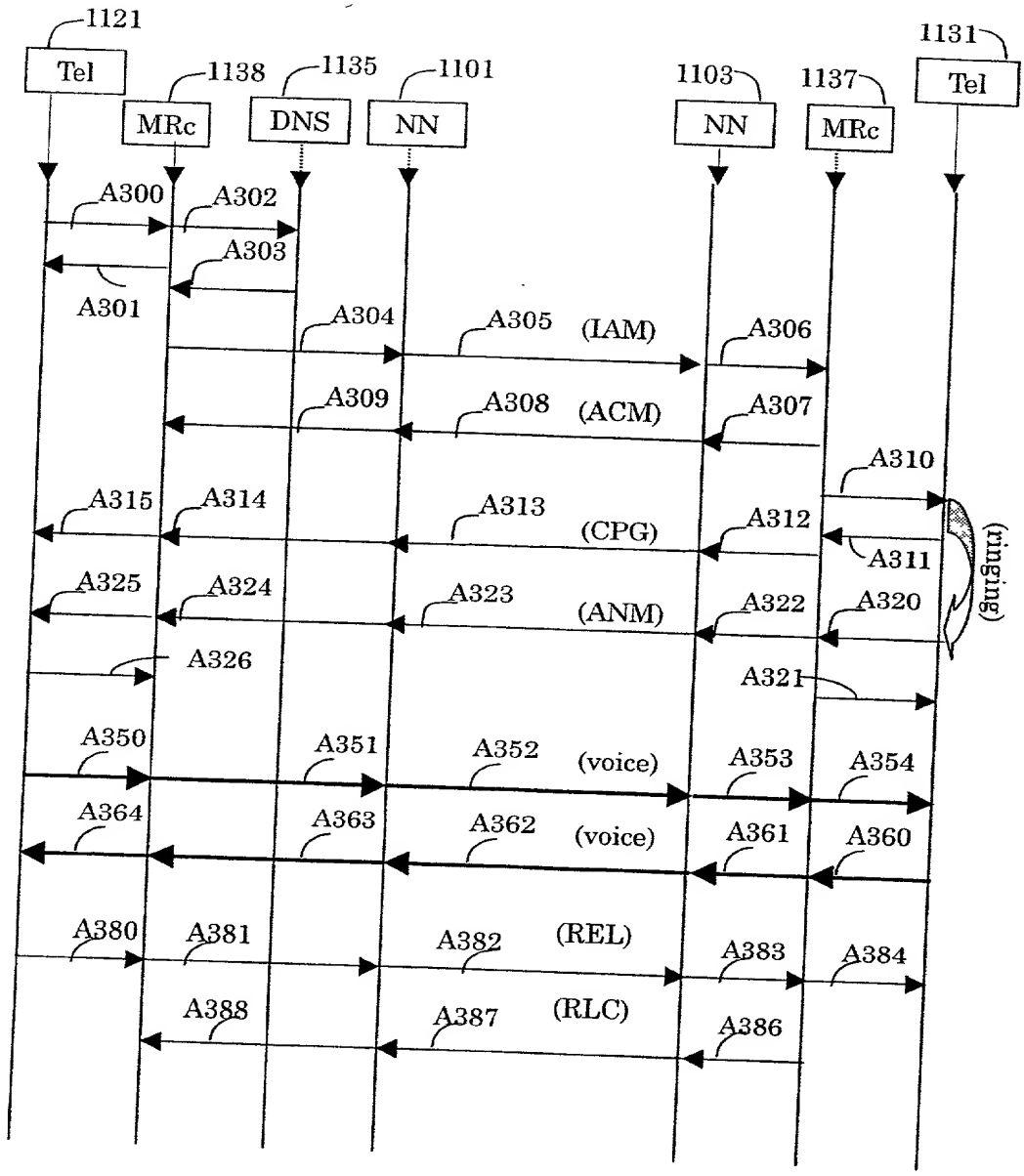

1121
Tel
1138
MRc
1135
DNS
1101
NN
1103
NN
1137
MRc
1131
Tel
A300
A302
A303
A301
A304
A305
(IAM)
A306
A309
A308
(ACM)
A307
A310
A315
A314
A313
(CPG)
A312
A311
(ringing)
A325
A324
A323
(ANM)
A322
A320
A326
A321
A350
A351
A352
(voice)
A353
A354
A364
A363
A362
(voice)
A361
A360
A380
A381
A382
(REL)
A383
A384
A388
A387
(RLC)
A386

FIG.138

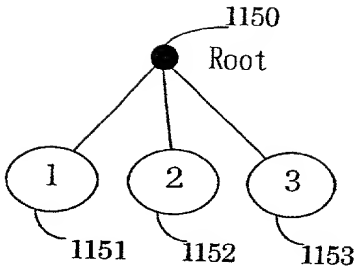


FIG.139

1155

Telephone Number	Domain Name Expression of Telephone No.
1 × ×	1.
2 × ×	2.
3 × ×	3.

FIG.140

1156

Question to Telephone Number Server		Contents of Answer
Question	1.	EA1
	2.	EA2
	3.	EA3

FIG.141

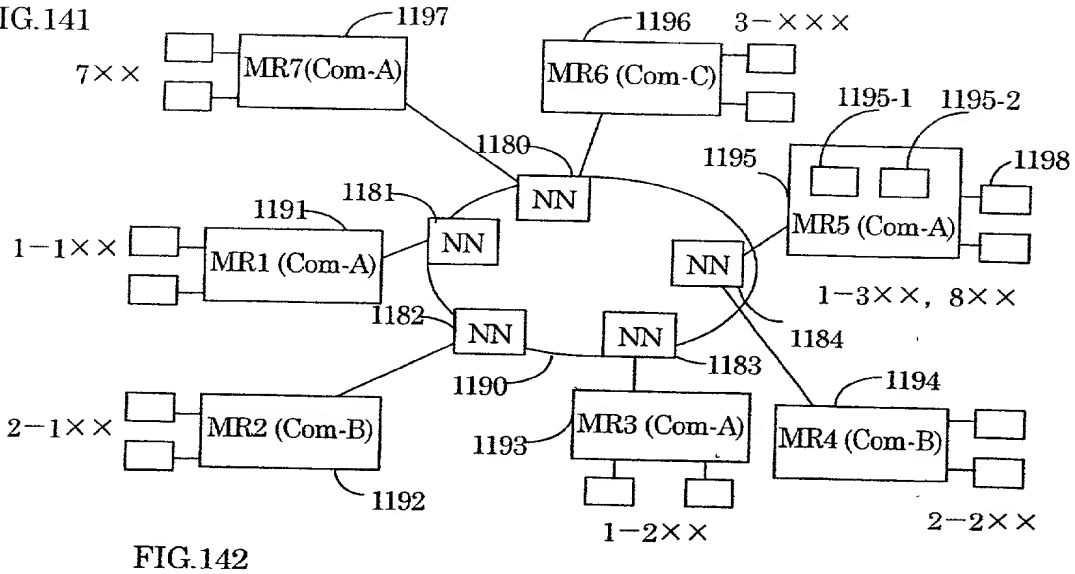


FIG.142

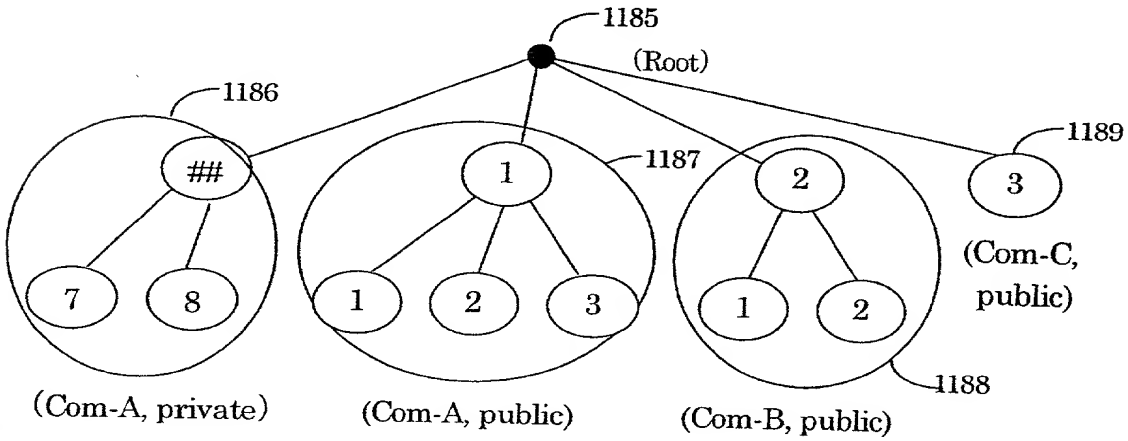


FIG.143

1185-1

Telephone Number	Domain Name Expression of Telephone No.
1−1××	1. 1.
1−2××	2. 1.
1−3××	3. 1.
2−1××	1. 2.
2−2××	2. 2.
3−×××	3.
7××	7. #.
8××	8. #.

FIG.144

1185-2

Question to Telephone No. Server	Contents of Answer
1. 1.	IP Address of MR1
2. 1.	IP Address of MR3
3. 1.	IP Address of MR5
1. 2.	IP Address of MR2
2. 2.	IP Address of MR4
3.	IP Address of MR6
7. ##.	IP Address of MR7
8. ##.	IP Address of MR5

EP 0 952 528 A2

TD2280 '2S2/28S0

FIG.145

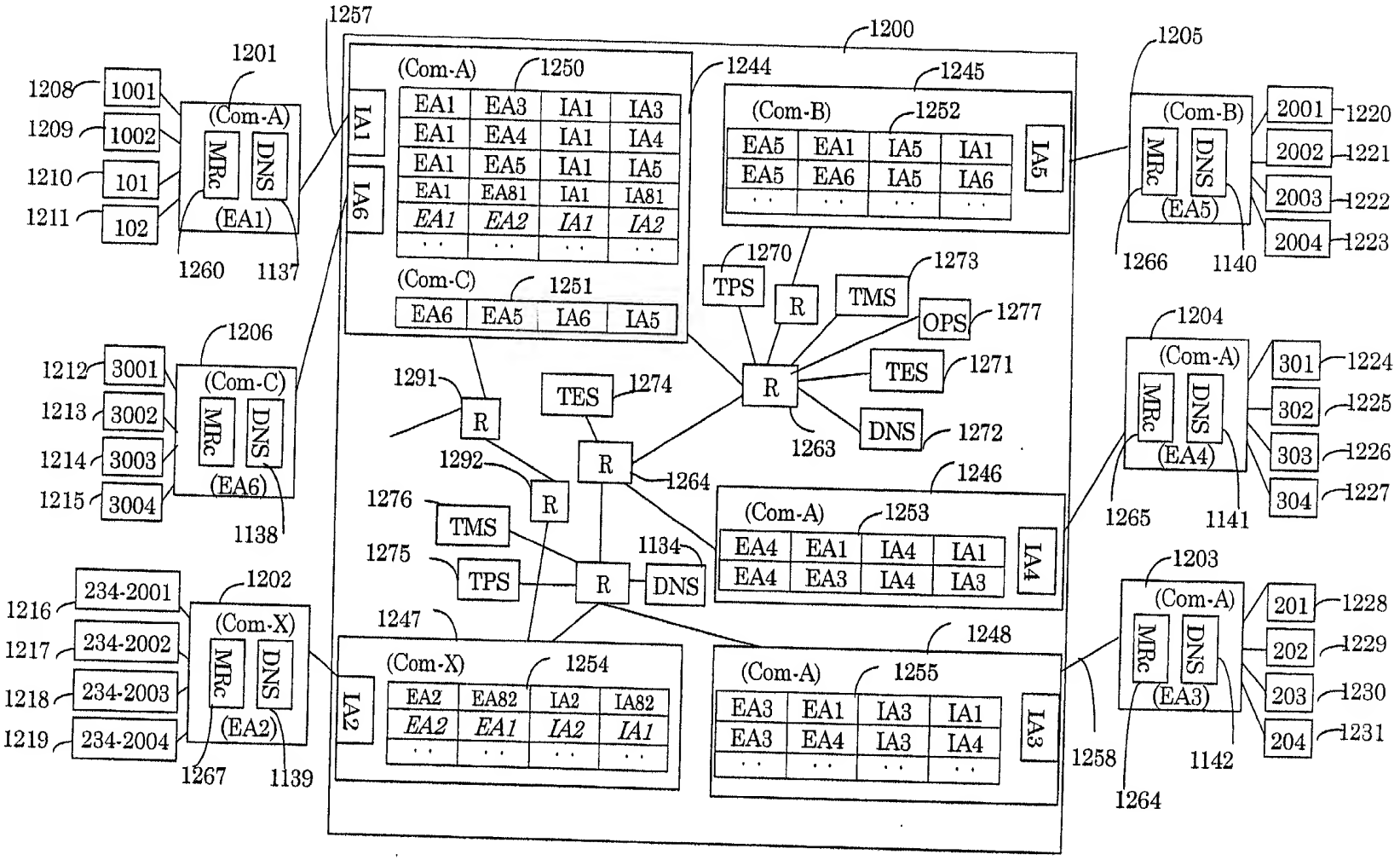


FIG.146

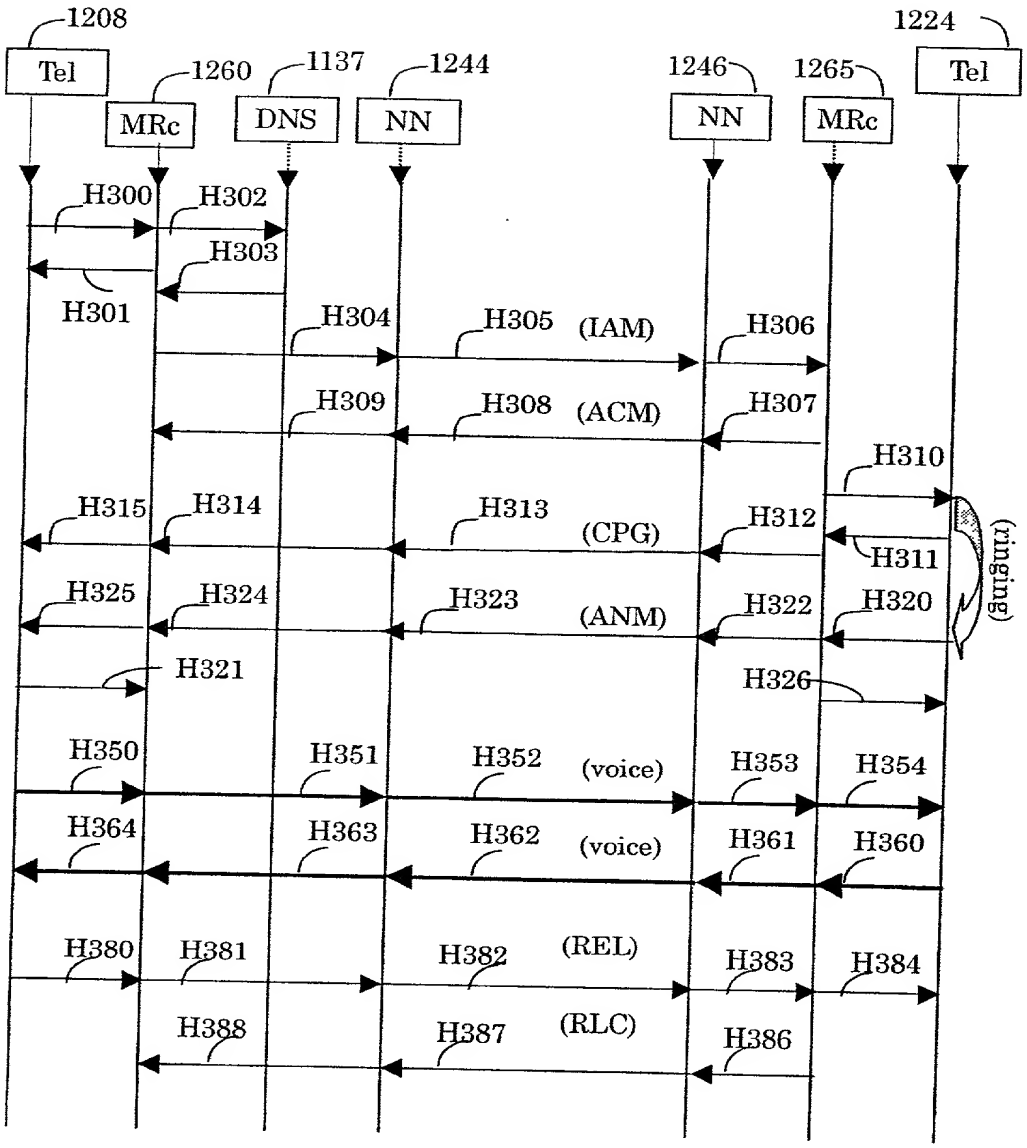

1208
Tel
1260
MRc
1137
DNS
1244
NN
1246
NN
1265
MRc
1224
Tel
H300
H302
H303
H301
H304
H305
(IAM)
H306
H309
H308
(ACM)
H307
H310
H315
H314
H313
(CPG)
H312
H311
(ringing)
H325
H324
H323
(ANM)
H322
H320
H321
H326
H350
H351
H352
(voice)
H353
H354
H364
H363
H362
(voice)
H361
H360
H380
H381
H382
(REL)
H383
H384
H388
H387
(RLC)
H386

FIG.147

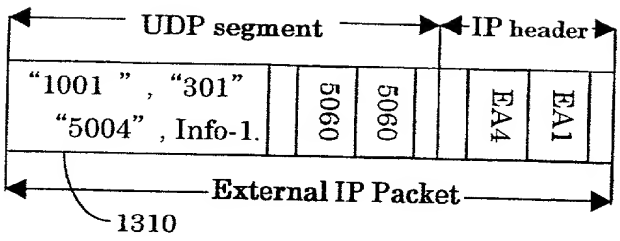


FIG.148

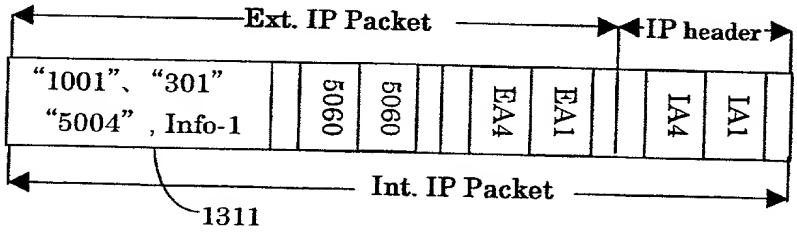


FIG.149

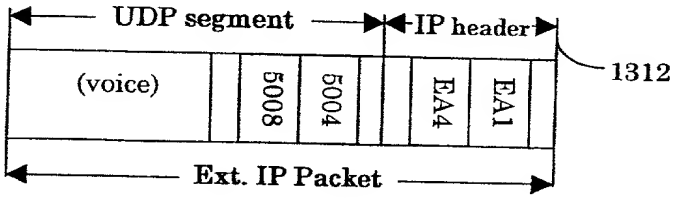
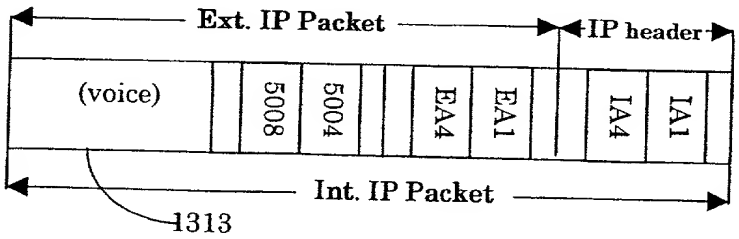


FIG.150



TO2280 "2927860

FIG.151

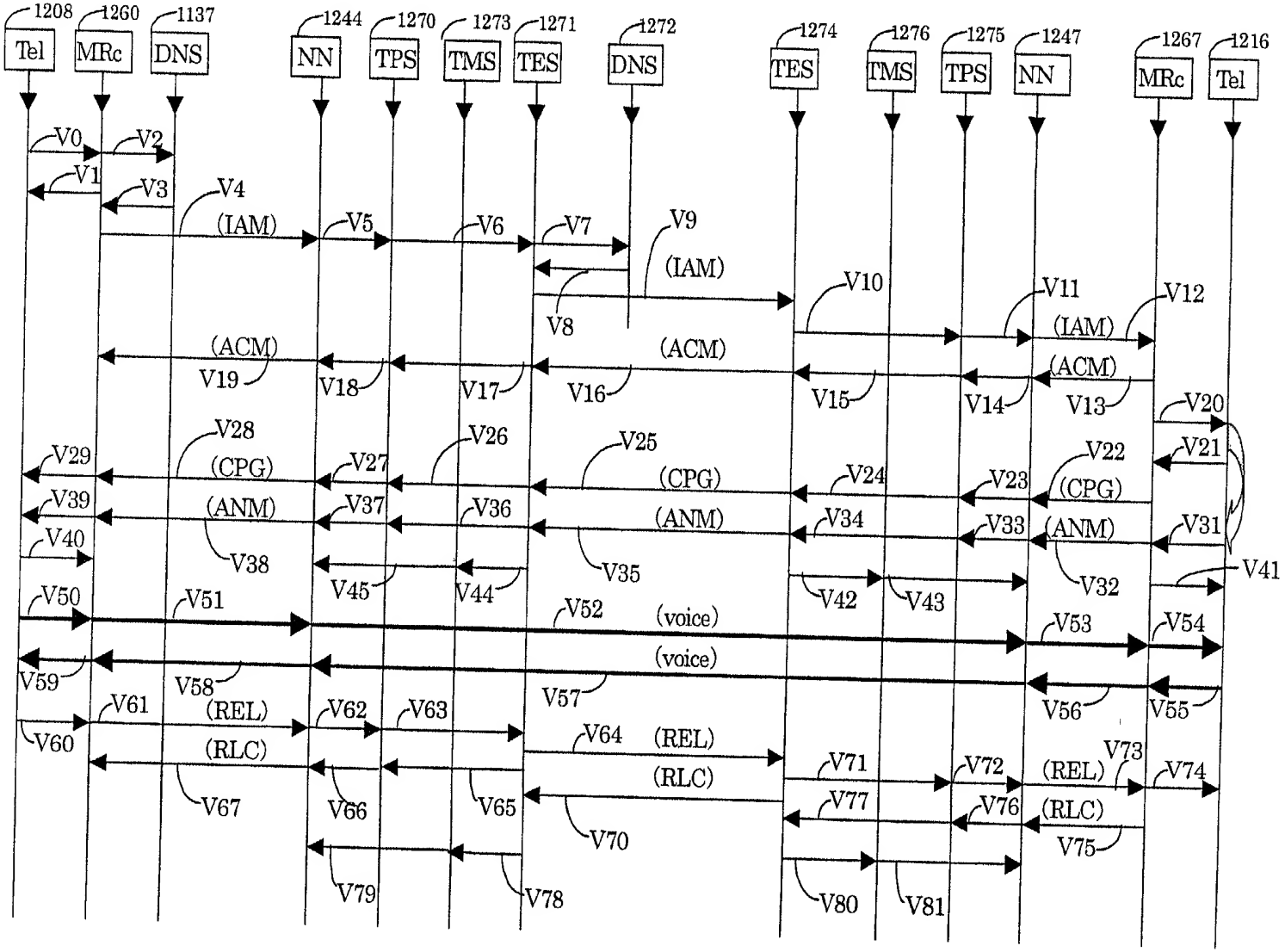


FIG.152

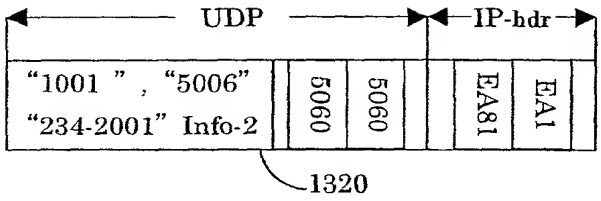


FIG.153

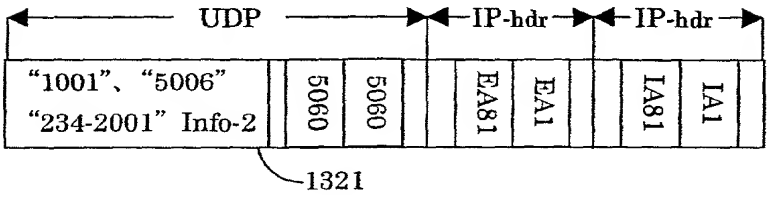


FIG.154

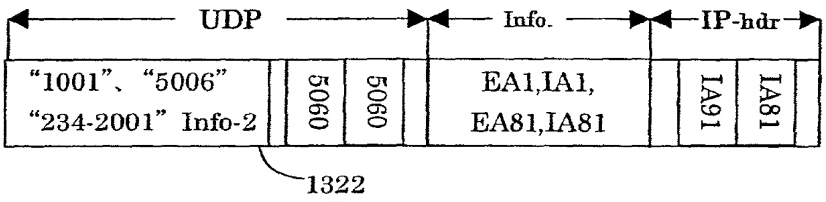


FIG.155

1323

CIC No.	Sender Phone No.	Receiver Phone No.	IP Address	Step	Start Time	End Time
CIC-1	"1004"	"××・・×"	×,×,××・・	ANM	St-1	
CIC-2	"1001"	"234-2001"	EA1,IA1,EA81, IA81,IA91	IAM	St-2	
・・	・・	・・	・・	・・	・・	・・

FIG.156

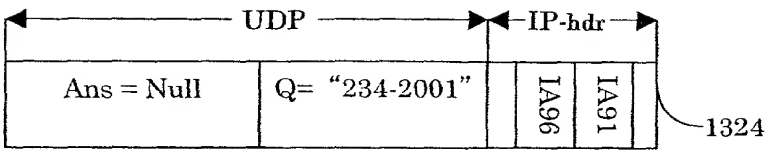


FIG.157

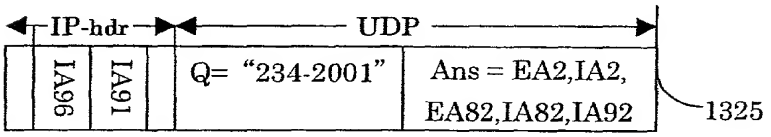


FIG.158

1326-1

CIC No.	Sender Phone No.	Receiver Phone No.	IP Address	Step	Start Time	End Time
CIC-1	"1004"	"××"	×,×,×× · ·	ANM	St-1	
CIC-2	"1001"	"234-2001"	EA1,IA1,EA81,IA 81,IA91,EA2,IA2, EA82,IA82,IA92	IAM	St-2	
· ·	· ·	· ·	· ·	· ·	· ·	· ·

FIG.159

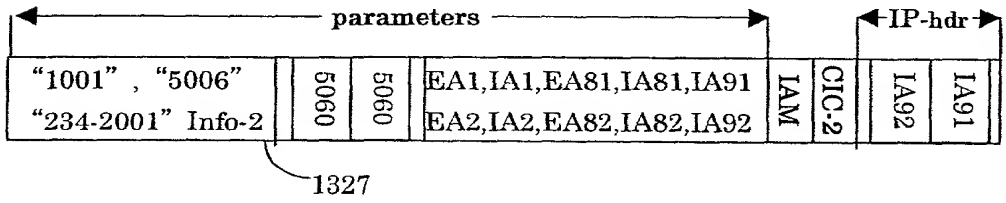


FIG.160

1326-2

CIC No.	Sender Phone No.	Receiver Phone No.	IP Address	Step	Start Time	End Time
CIC-2	"1001"	"234-2001"	EA1,IA1,EA81,IA 81,IA91,EA2,IA2, EA82,IA82,IA92	IAM	St-3	
· ·	· ·	· ·	· ·	· ·	· ·	· ·

FIG.161

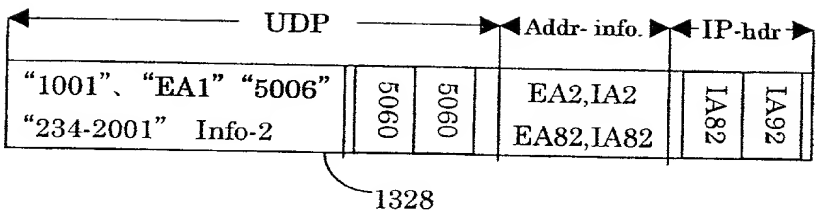


FIG.162

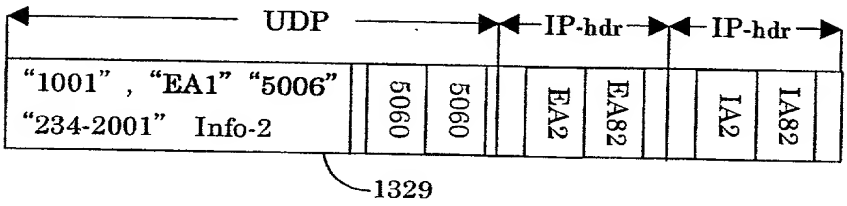


FIG.163

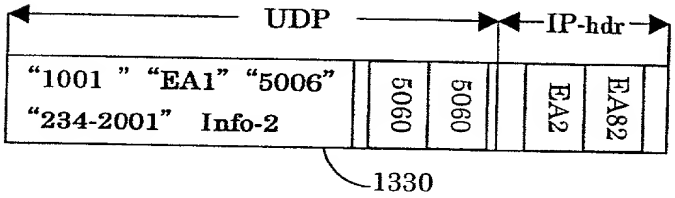


FIG.164

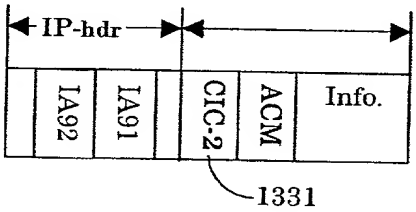


FIG.165

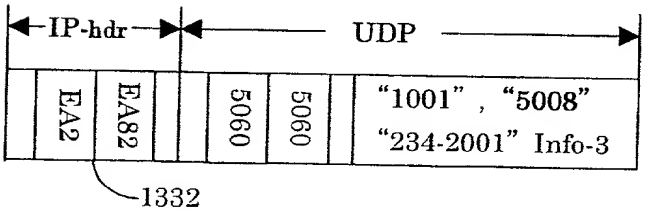


FIG.166

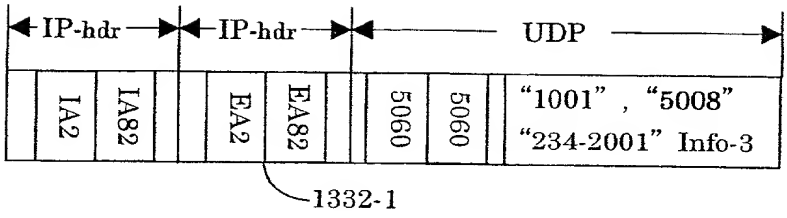


FIG.167

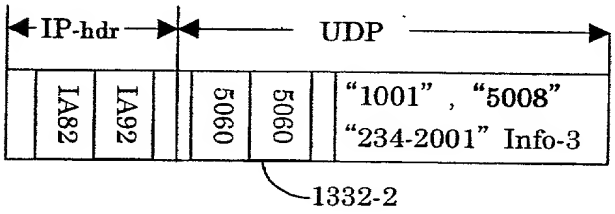


FIG.168

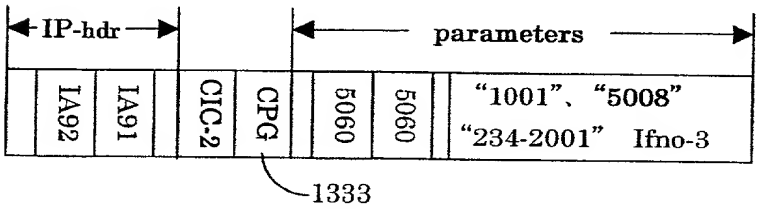


FIG.169

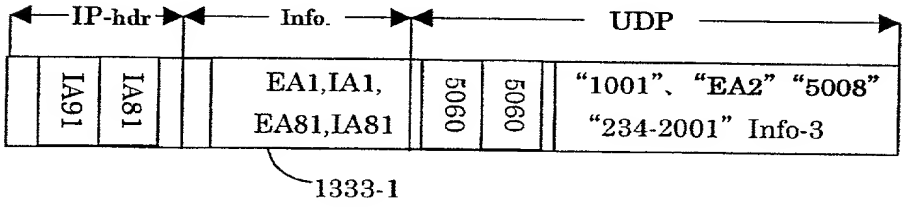


FIG.170

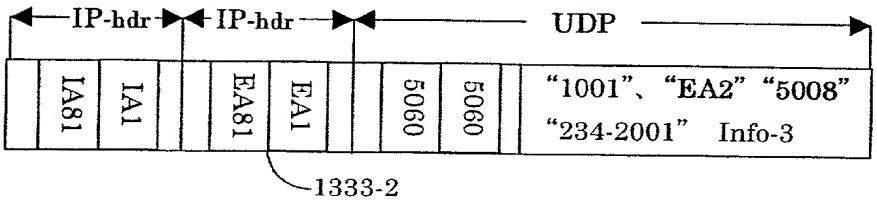


FIG.171

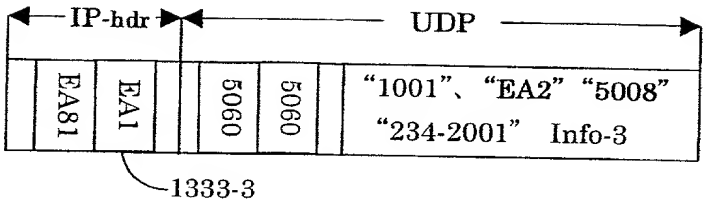


FIG.172

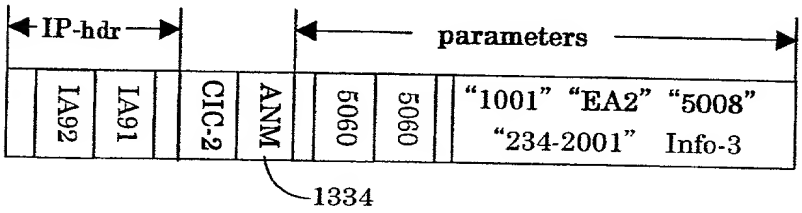


FIG.173

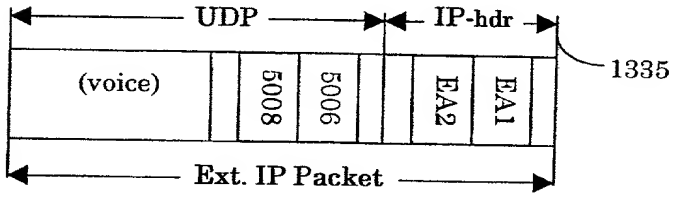


FIG.174

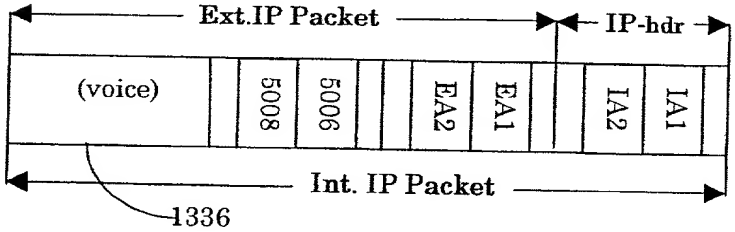


FIG.175

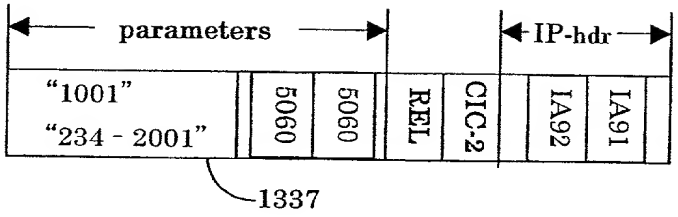


FIG.176

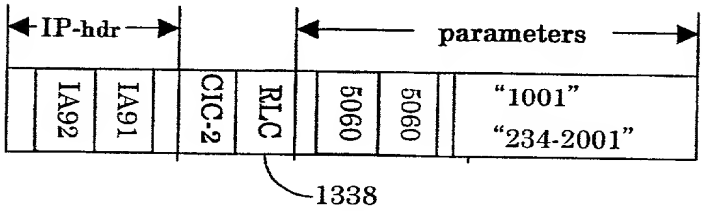


FIG.177

1326−5

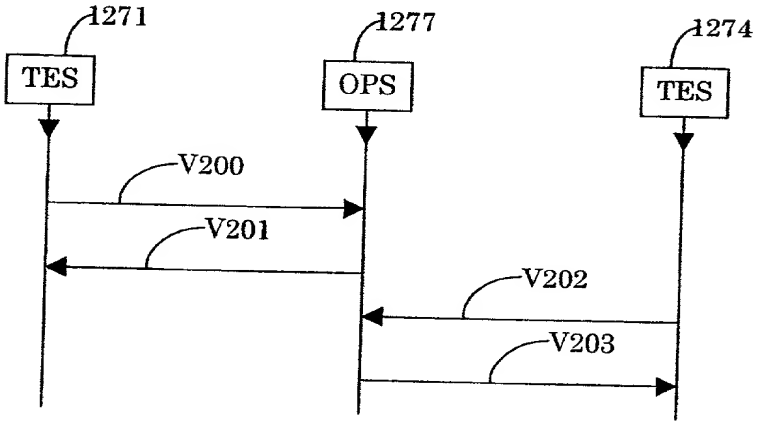
(MR IP Address)	No. of Using Line	Upper Lim.of Line
EA1	2	5
EA6	3	4
. .	. .	. .

FIG.178

1326−6

(MR IP Address)	No. of Using Line	Upper Lim. of Line
EA7	0	3
EA2	2	7
. .	. .	. .

FIG.179



TOKKYO-2002-282860

FIG.180

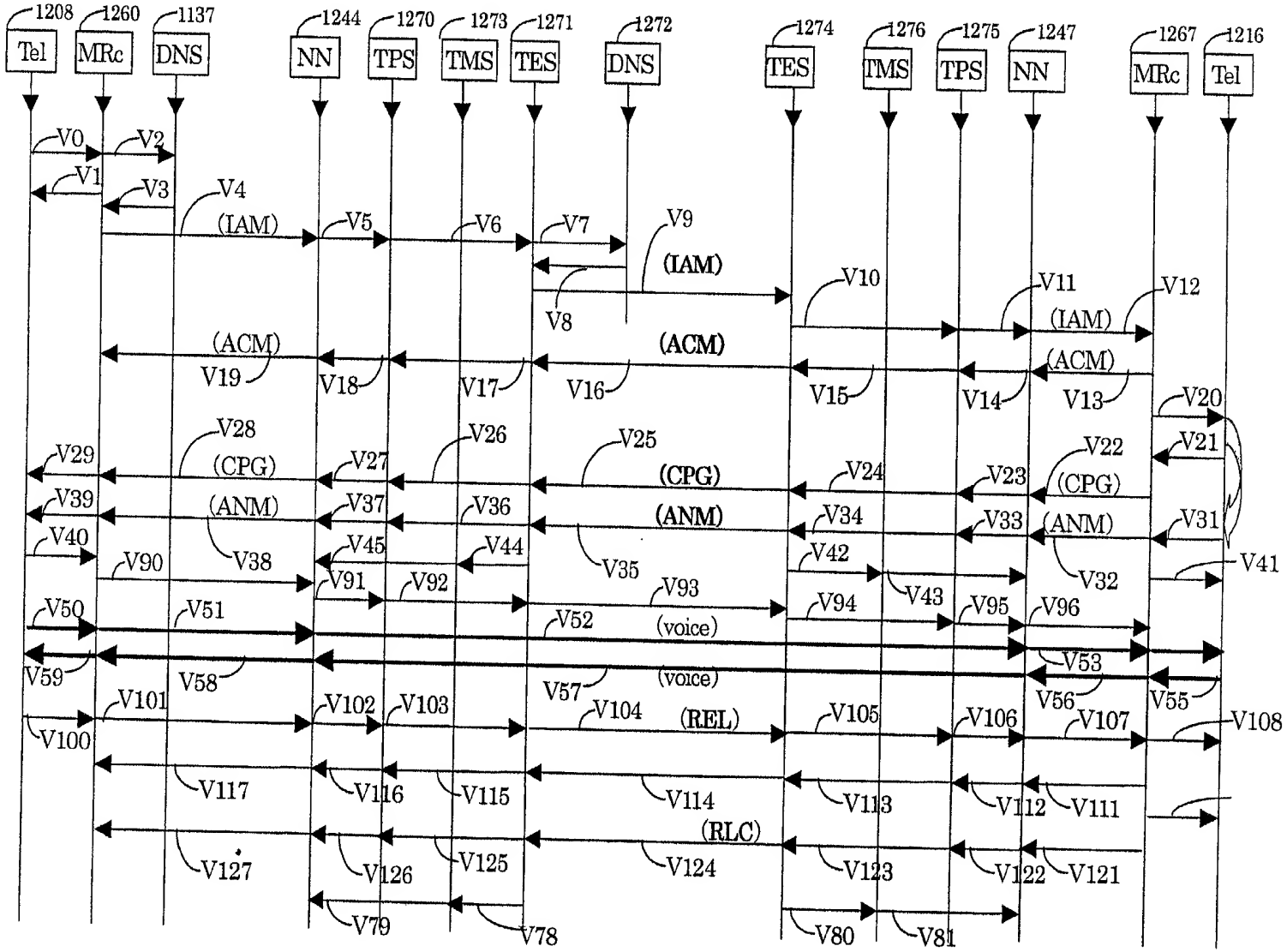


FIG.181

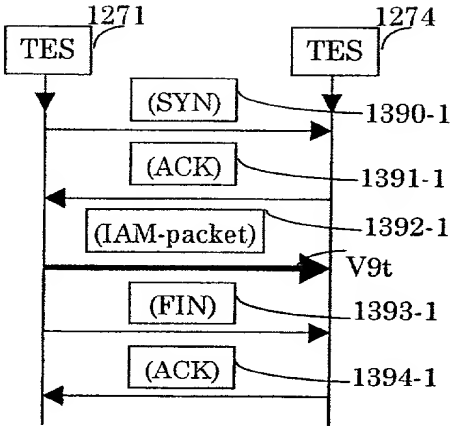


FIG.182

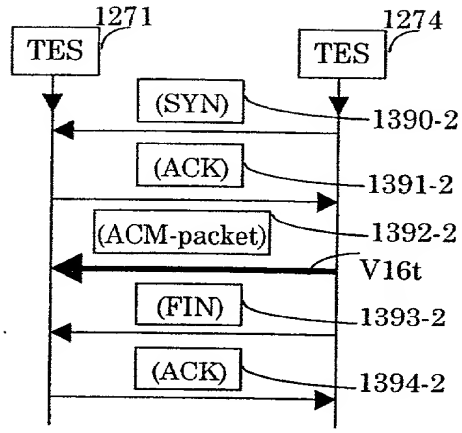


FIG.183

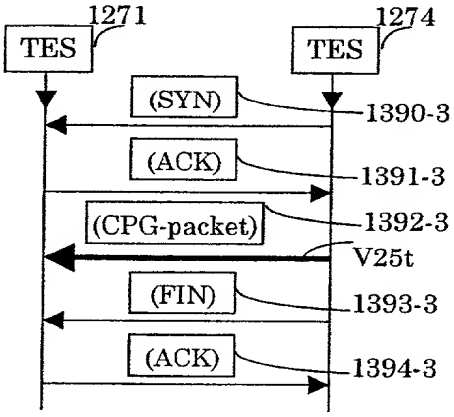


FIG.184

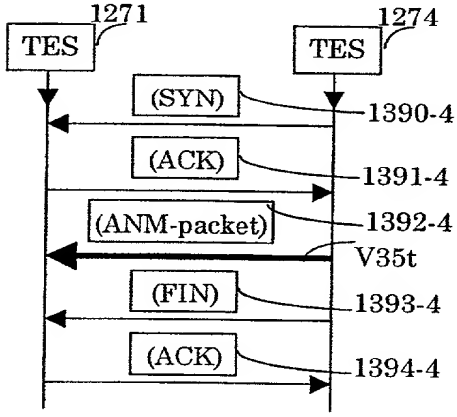


FIG.185

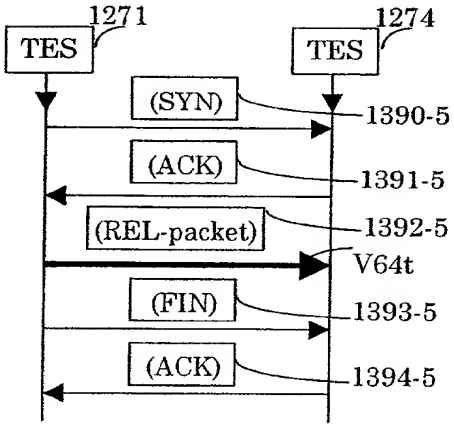


FIG.186

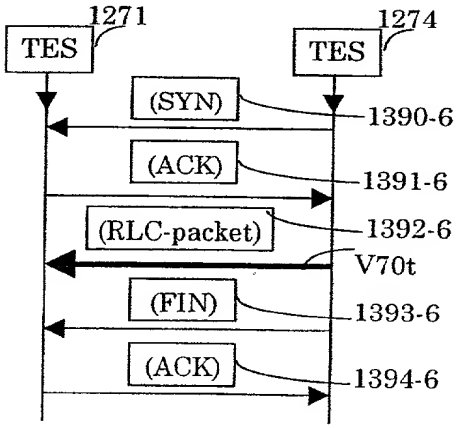
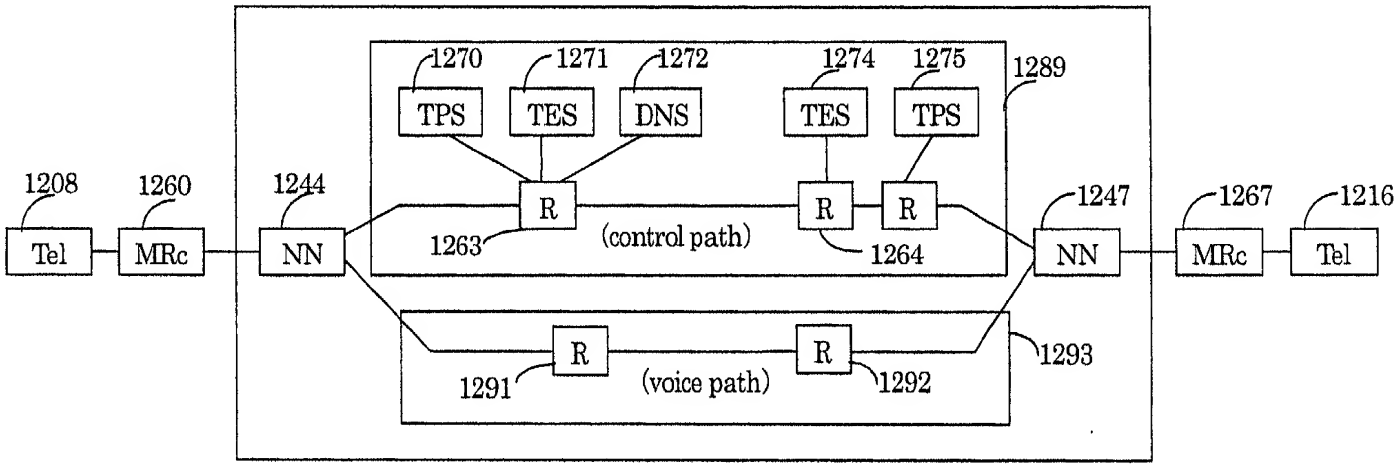


FIG.187


1270
1271
1272
1274
1275
1289
TPS
TES
DNS
TES
TPS
1208
1260
1244
1247
1267
1216
R
R
R
Tel
MRc
NN
1263
(control path)
1264
NN
MRc
Tel
R
R
1293
1291
(voice path)
1292

TD2290 2922860

FIG.188

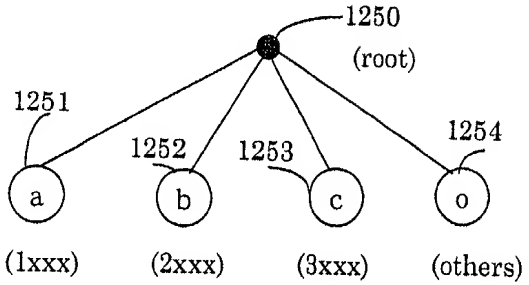


FIG.189

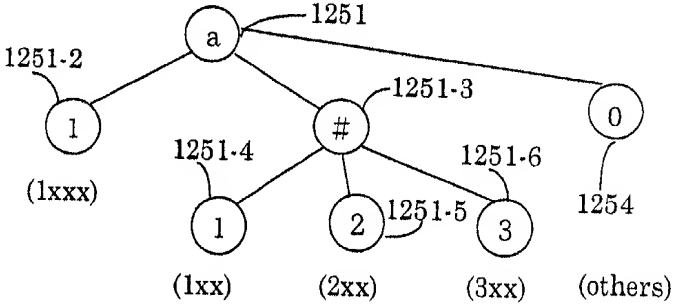


FIG.190

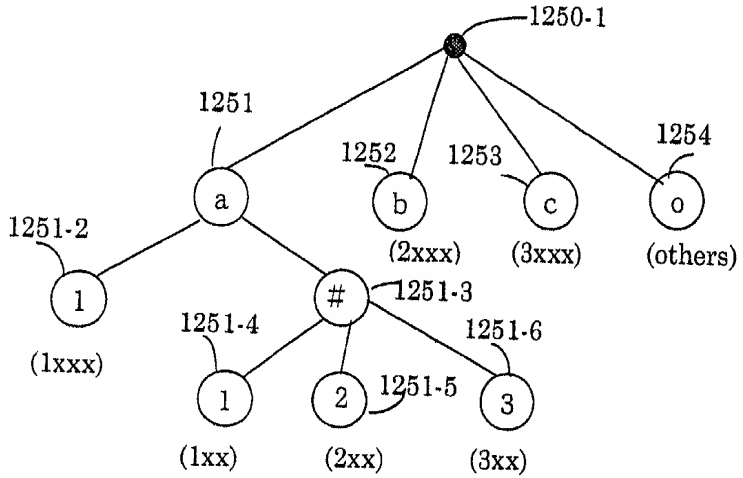


FIG.191

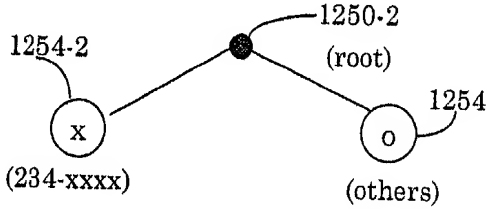


FIG.192

1255-1

Phone No.	Domain Name Expression of Phone No.
1xxx	1.a.
2xxx	b.
3xxx	c.
1xx	1.#.a.
2xx	2.#.a.
3xx	3.#.a.
others	o.

FIG.193

1255-2

Domain Name Expression of Phone No.	IP Address
1.a.	EA1
b.	EA5
c.	EA6
1.#.a.	EA1
2.#.a.	EA3
3.#.a.	EA4
o.	EA81

FIG.194

1256-1

Phone No.	Domain Name Expression of Phone No.
1xxx	1.a.
1xx	1.#.a.
2xx	2.#.a.
3xx	3.#.a.
others	o.

FIG.195

1256-2

Domain Name Expression of Phone No.	IP Address
1.a.	EA1
1.#.a.	EA1
2.#.a.	EA3
3.#.a.	EA4
o.	EA81

FIG.196

1257-1

Phone No.	Domain Name Expession of Phone No.
1xxx	a.
2xxx	b.
3xxx	c.
others	o.

FIG.197

1257-2

Domain Name Expression of Phone No.	IP Address
a.	EA1
b.	EA5
c.	EA6
o.	EA81

TO:2801 292:2860

FIG.198

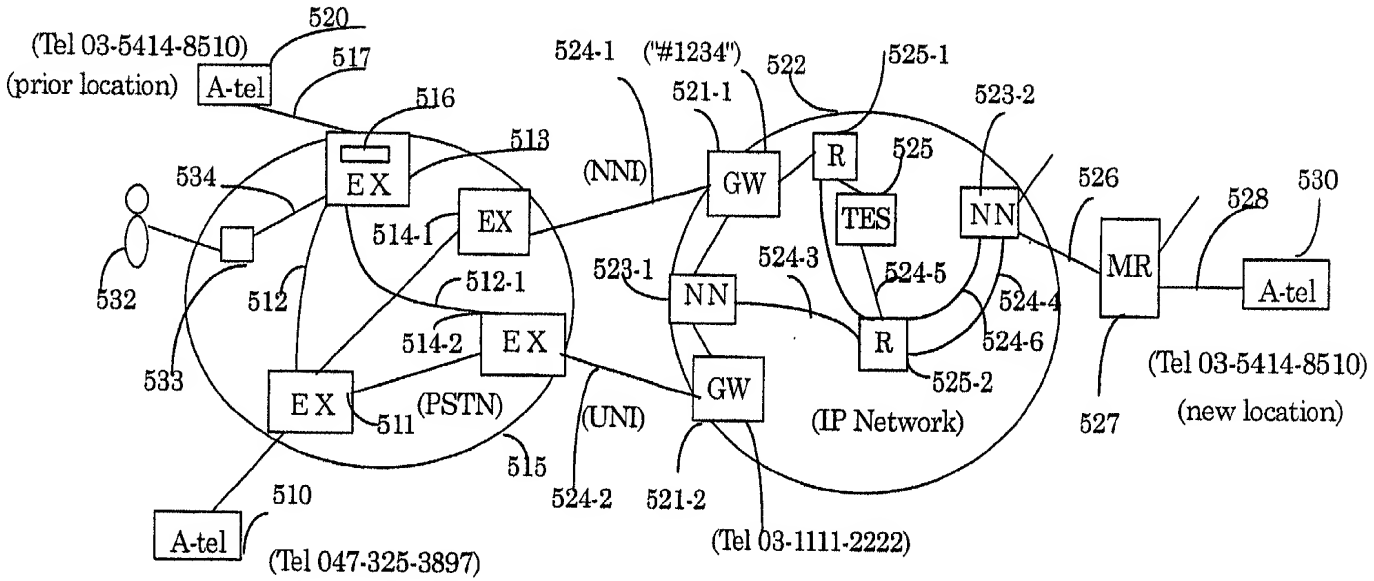


FIG.199

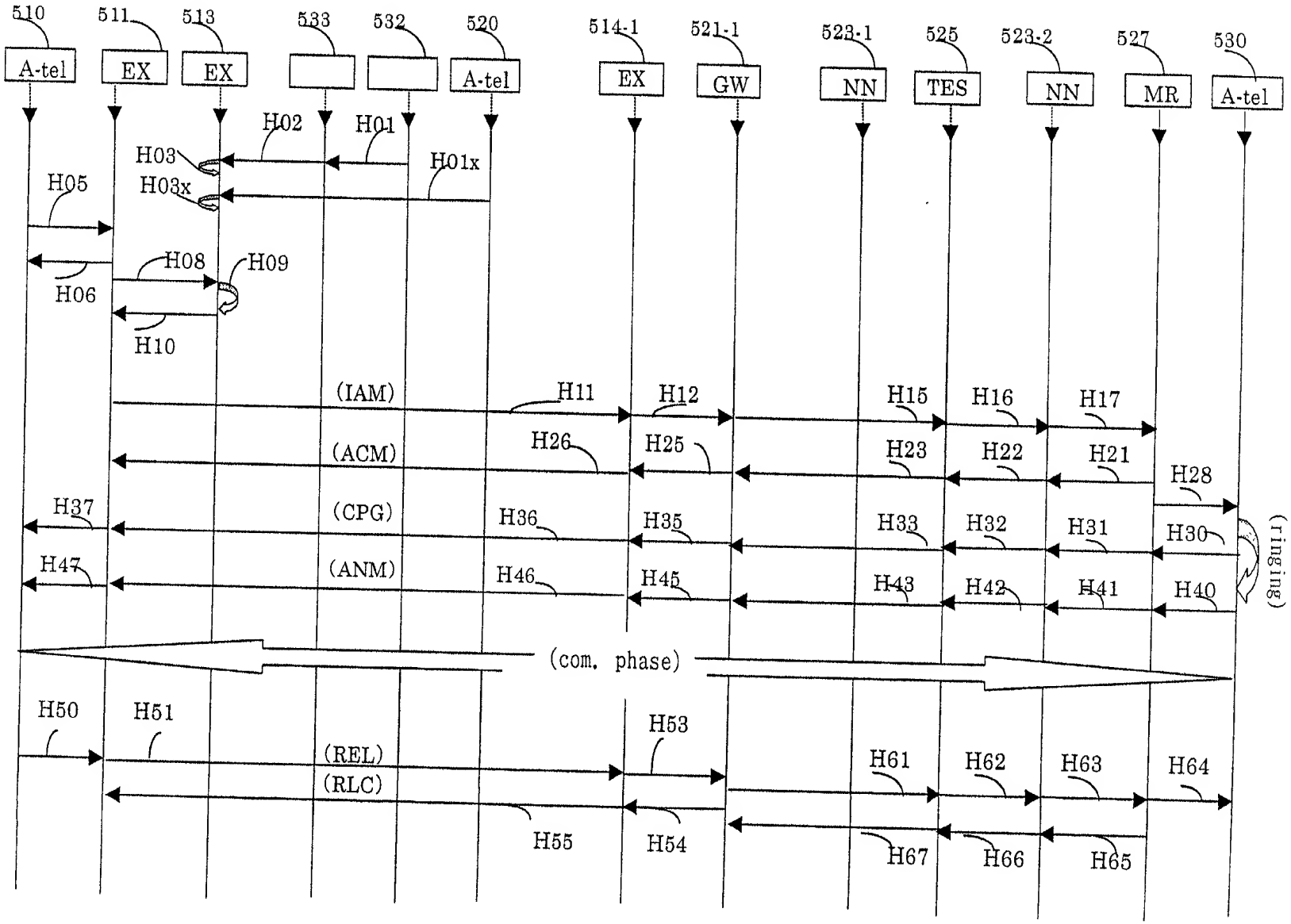

510
A-tel
511
EX
513
EX
533
532
520
A-tel
514-1
EX
521-1
GW
523-1
NN
525
TES
523-2
NN
527
MR
530
A-tel
H02
H01
H03
H01x
H03x
H05
H08
H09
H06
H10
(IAM)
H11
H12
H15
H16
H17
H26
H25
H23
H22
H21
(ACM)
H28
H37
(CPG)
H36
H35
H33
H32
H31
H30
(ringing)
H47
(ANM)
H46
H45
H43
H42
H41
H40
(com. phase)
H50
H51
H53
(REL)
H61
H62
H63
H64
(RLC)
H55
H54
H67
H66
H65

FIG.200

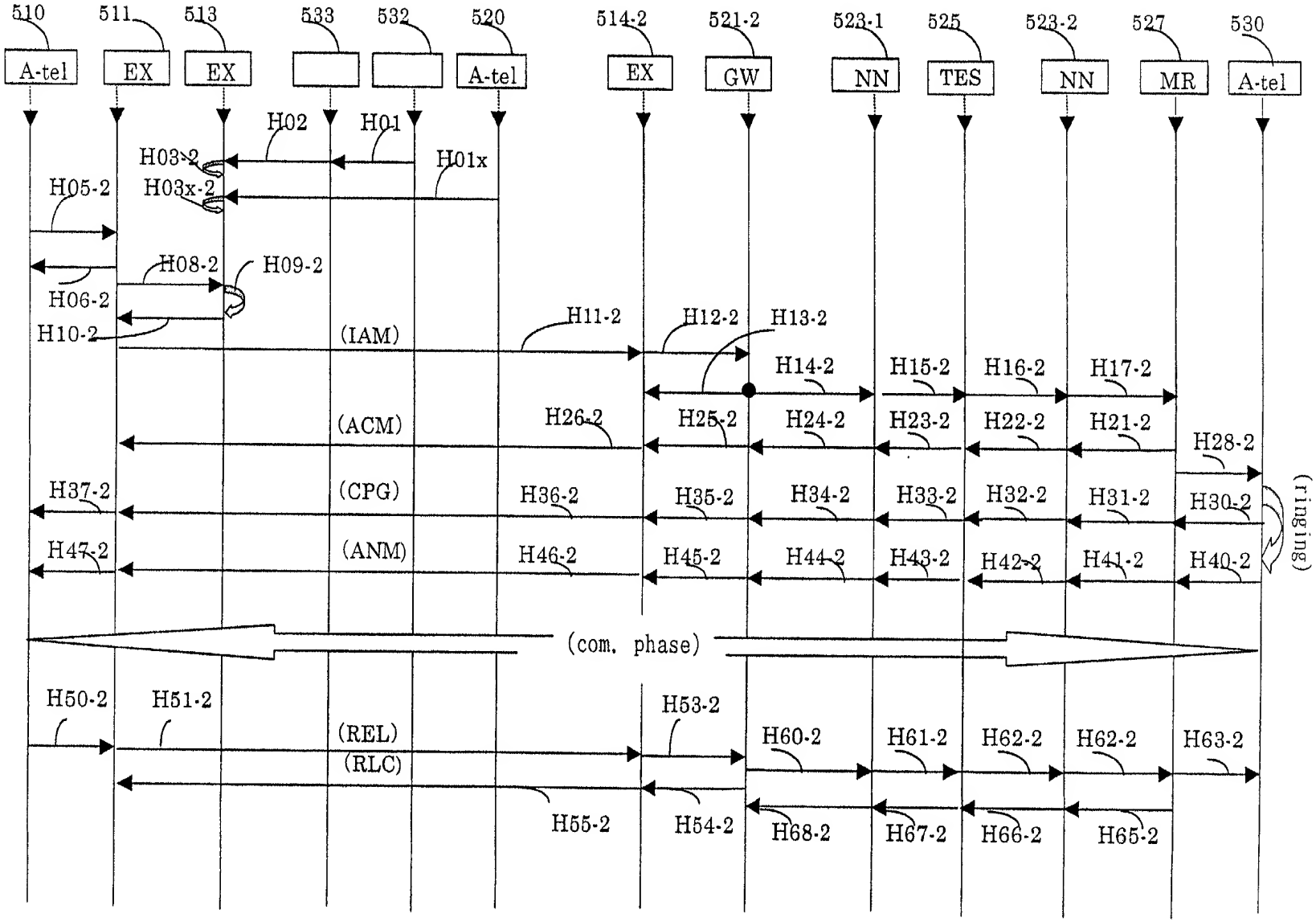
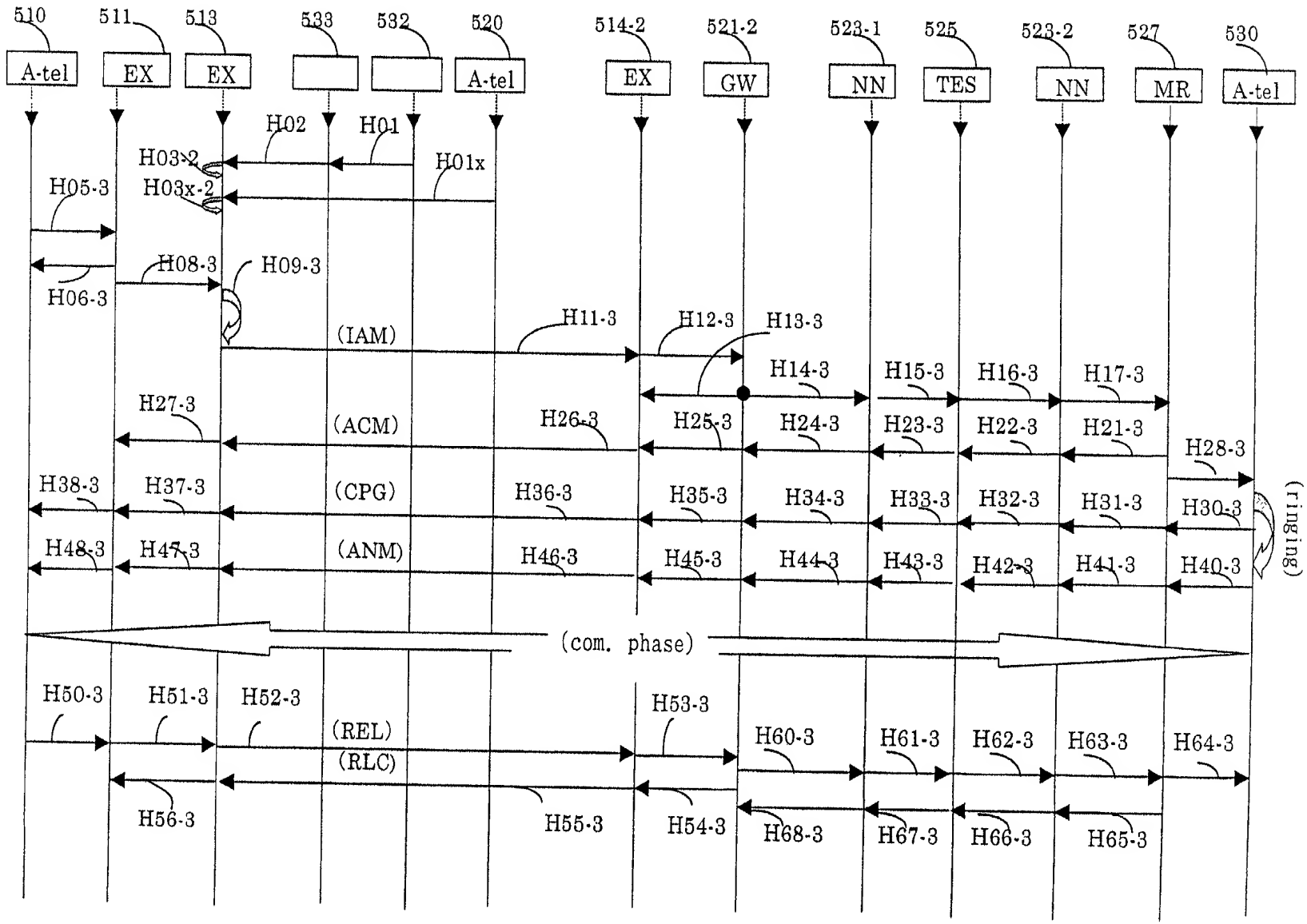

510
511
513
533
532
520
514-2
521-2
523-1
525
523-2
527
530
A-tel
EX
EX
A-tel
EX
GW
NN
TES
NN
MR
A-tel
H02
H01
H03-2
H01x
H05-2
H03x-2
H08-2
H09-2
H06-2
H10-2
(IAM)
H11-2
H12-2
H13-2
H14-2
H15-2
H16-2
H17-2
(ACM)
H26-2
H25-2
H24-2
H23-2
H22-2
H21-2
H28-2
(ringing)
H37-2
(CPG)
H36-2
H35-2
H34-2
H33-2
H32-2
H31-2
H30-2
H47-2
(ANM)
H46-2
H45-2
H44-2
H43-2
H42-2
H41-2
H40-2
(com. phase)
H50-2
H51-2
H53-2
(REL)
(RLC)
H60-2
H61-2
H62-2
H62-2
H63-2
H55-2
H54-2
H68-2
H67-2
H66-2
H65-2

FIG.201


510
511
513
533
532
520
514-2
521-2
523-1
525
523-2
527
530
A-tel
EX
EX
A-tel
EX
GW
NN
TES
NN
MR
A-tel
H02
H01
H03-2
H01x
H05-3
H03x-2
H08-3
H09-3
H06-3
(IAM)
H11-3
H12-3
H13-3
H14-3
H15-3
H16-3
H17-3
H27-3
(ACM)
H26-3
H25-3
H24-3
H23-3
H22-3
H21-3
H28-3
H38-3
H37-3
(CPG)
H36-3
H35-3
H34-3
H33-3
H32-3
H31-3
H30-3
(ringing)
H48-3
H47-3
(ANM)
H46-3
H45-3
H44-3
H43-3
H42-3
H41-3
H40-3
(com. phase)
H50-3
H51-3
H52-3
(REL)
H53-3
H60-3
H61-3
H62-3
H63-3
H64-3
(RLC)
H56-3
H55-3
H54-3
H68-3
H67-3
H66-3
H65-3

TD2280 "2922660

FIG.202

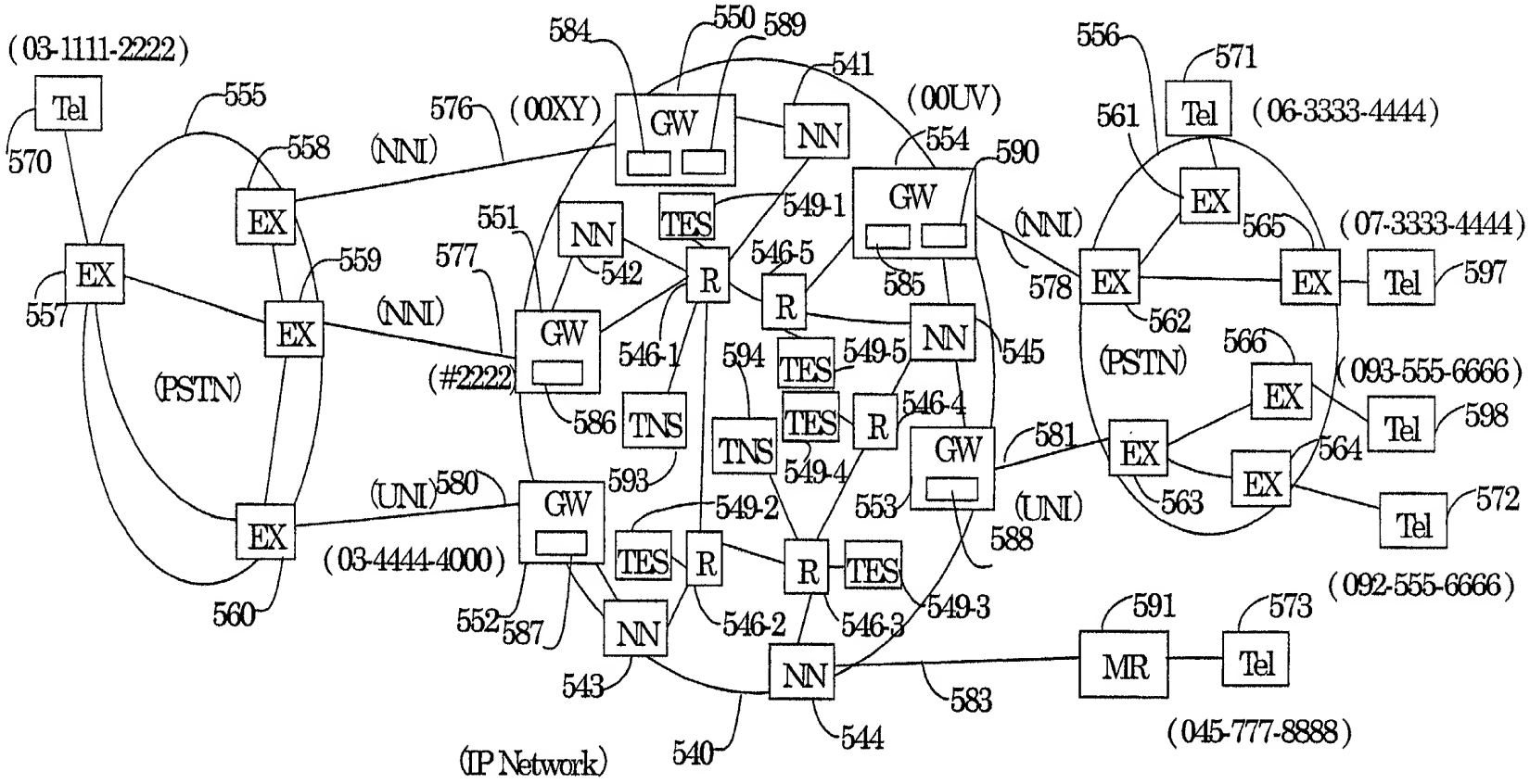


FIG.203

584

Range of Receiver Phone No.	Division	Phone No. of Input GW	Sig. Pt. Code of Input GW
06-0000-0000～06-9999-9999	NNI		#2222
092-000-0000～092-999-9999	UNI	03-4444-4000～ 03-4444-4099	
045-777-8880～045-777-8890	UNI	03-4444-4000～ 03-4444-4099	
07-0000-0000～07-9999-9999	UNI	03-4444-4000～ 03-4444-4099	
093-000-0000～093-999-9999	NNI		#2222
. .		. .	. .

hex-decimal

FIG.204

586

Range of Sender Phone No.	Information of Output Line (IP Add. Range of Output GW/MR)
06-0000-0000～06-9999-9999	10.240.240.1～10.240.240.255
092-000-0000～092-999-9999	10.240.241.1～10.240.241.31
045-777-8880～045-777-8890	10.241.1.1 ～ 10.241.1.3
07-0000-0000～07-9999-9999	10.240.240.1～10.240.240.255
093-000-0000～093-999-9999	10.240.241.1～10.240.241.31
. .	. .

FIG.205

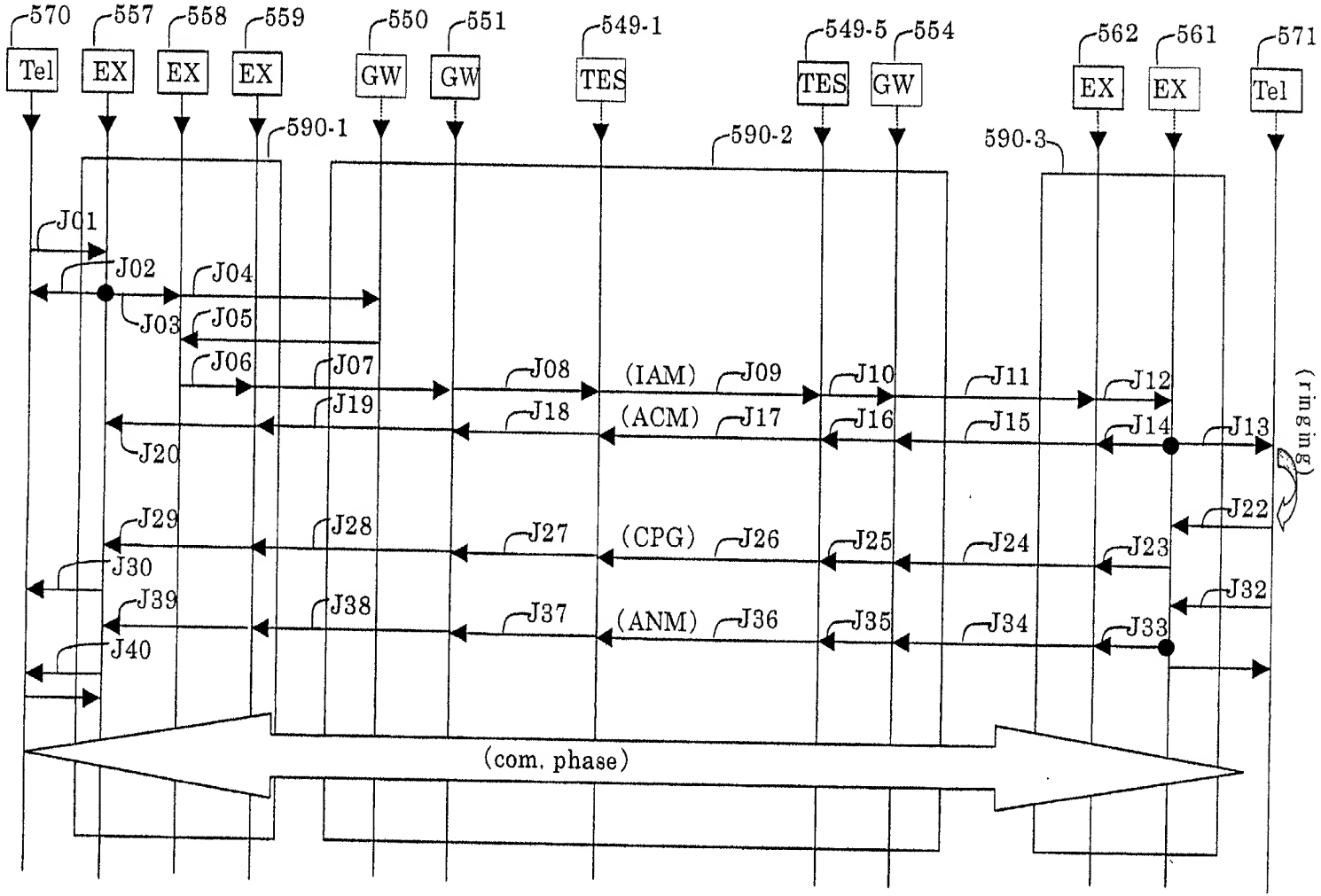

570
557
558
559
550
551
549-1
549-5
554
562
561
571
Tel
EX
EX
EX
GW
GW
TES
TES
GW
EX
EX
Tel
590-1
590-2
590-3
J01
J02
J03
J04
J05
J06
J07
J08
(IAM)
J09
J10
J11
J12
J13
J14
J15
J16
J17
(ACM)
J18
J19
J20
(ringing)
J22
J23
J24
J25
J26
(CPG)
J27
J28
J29
J30
J32
J33
J34
J35
J36
(ANM)
J37
J38
J39
J40
(com. phase)

FIG.206

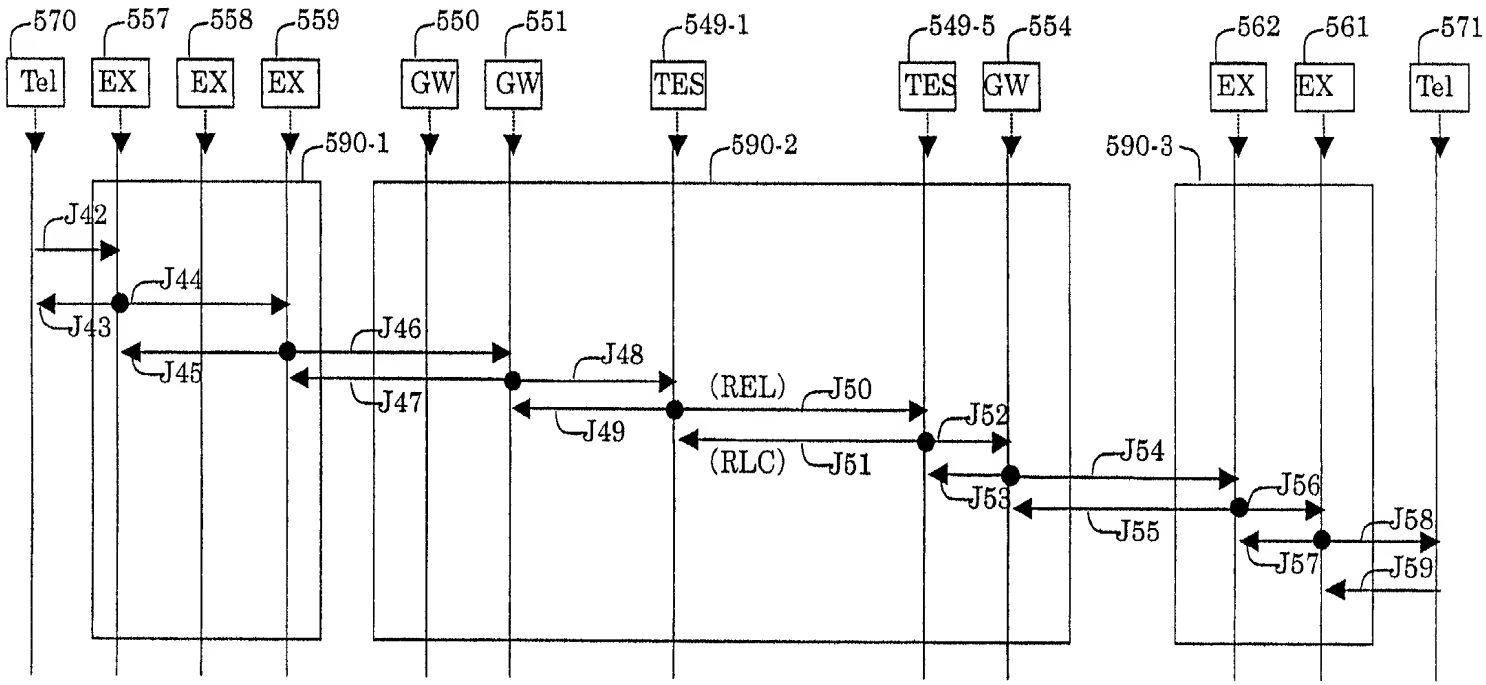
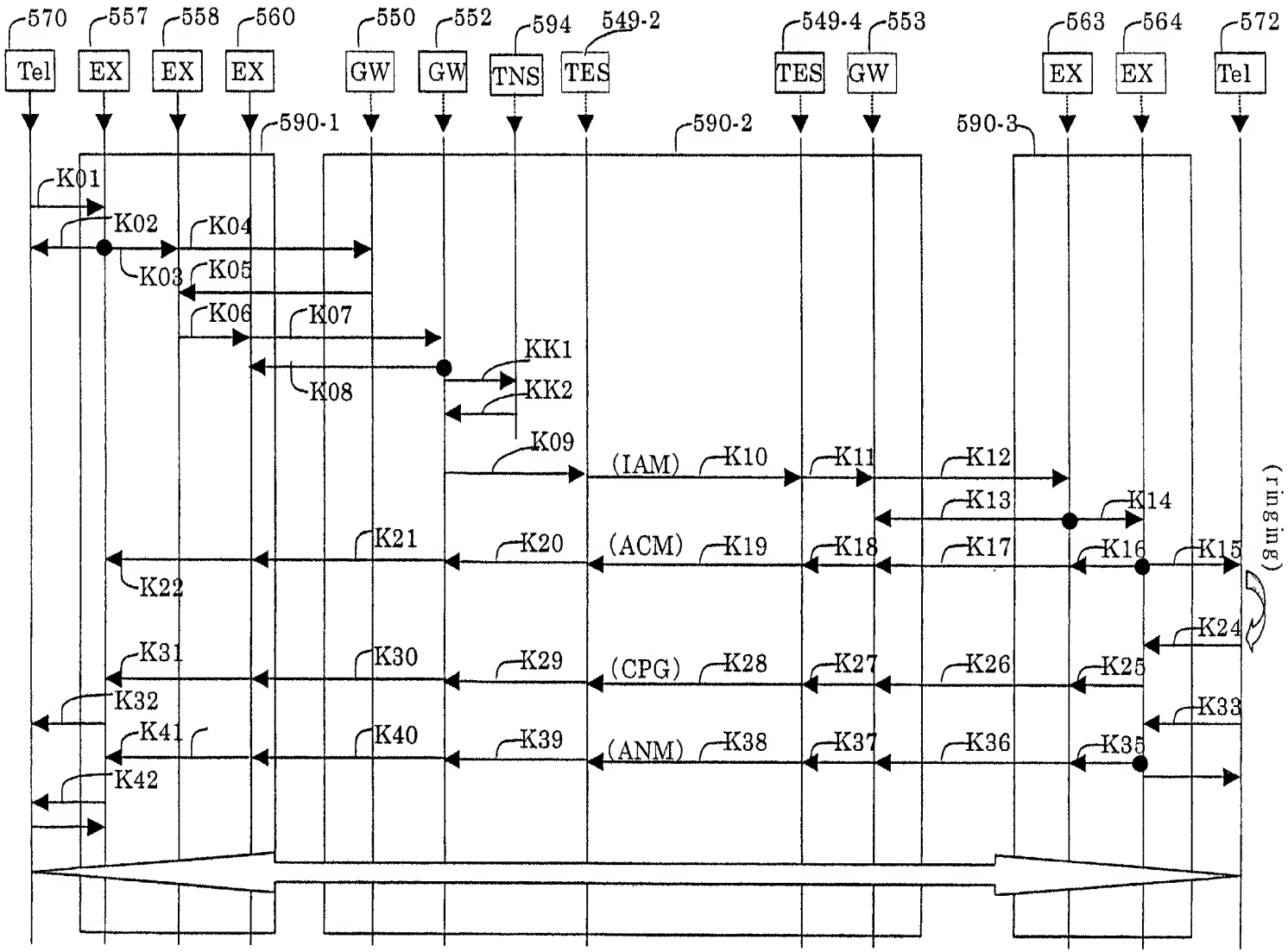
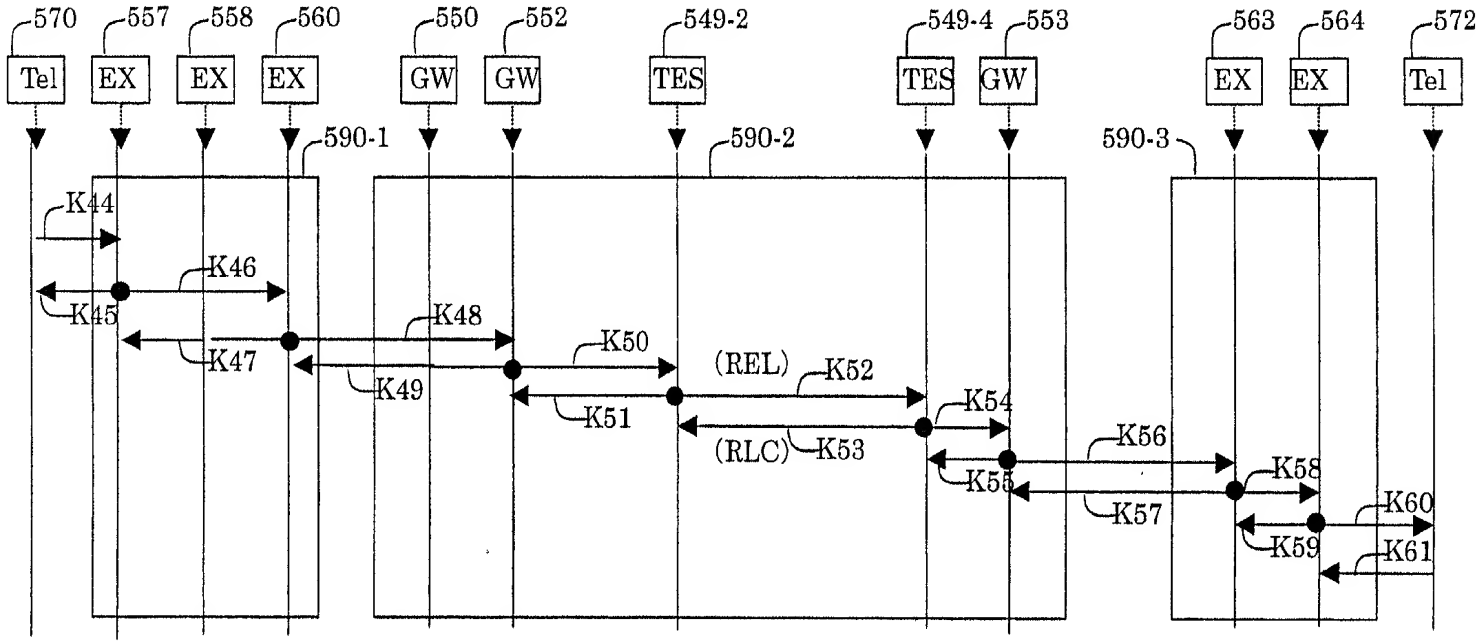

570
557
558
559
550
551
549-1
549-5
554
562
561
571
Tel
EX
EX
EX
GW
GW
TES
TES
GW
EX
EX
Tel
590-1
590-2
590-3
J42
J44
J43
J46
J48
J45
J47
(REL)
J50
J49
J52
(RLC)
J51
J54
J53
J56
J55
J58
J57
J59

FIG.207


570
557
558
560
550
552
594
549-2
549-4
553
563
564
572
Tel
EX
EX
EX
GW
GW
TNS
TES
TES
GW
EX
EX
Tel
590-1
590-2
590-3
K01
K02
K04
K03
K05
K06
K07
KK1
K08
KK2
K09
(IAM)
K10
K11
K12
K13
K14
K21
K20
(ACM)
K19
K18
K17
K16
K15
K22
(ringing)
K24
K31
K30
K29
(CPG)
K28
K27
K26
K25
K32
K33
K41
K40
K39
(ANM)
K38
K37
K36
K35
K42

TD2280 2922860

FIG.208



TOZ280 '2927860

FIG.209

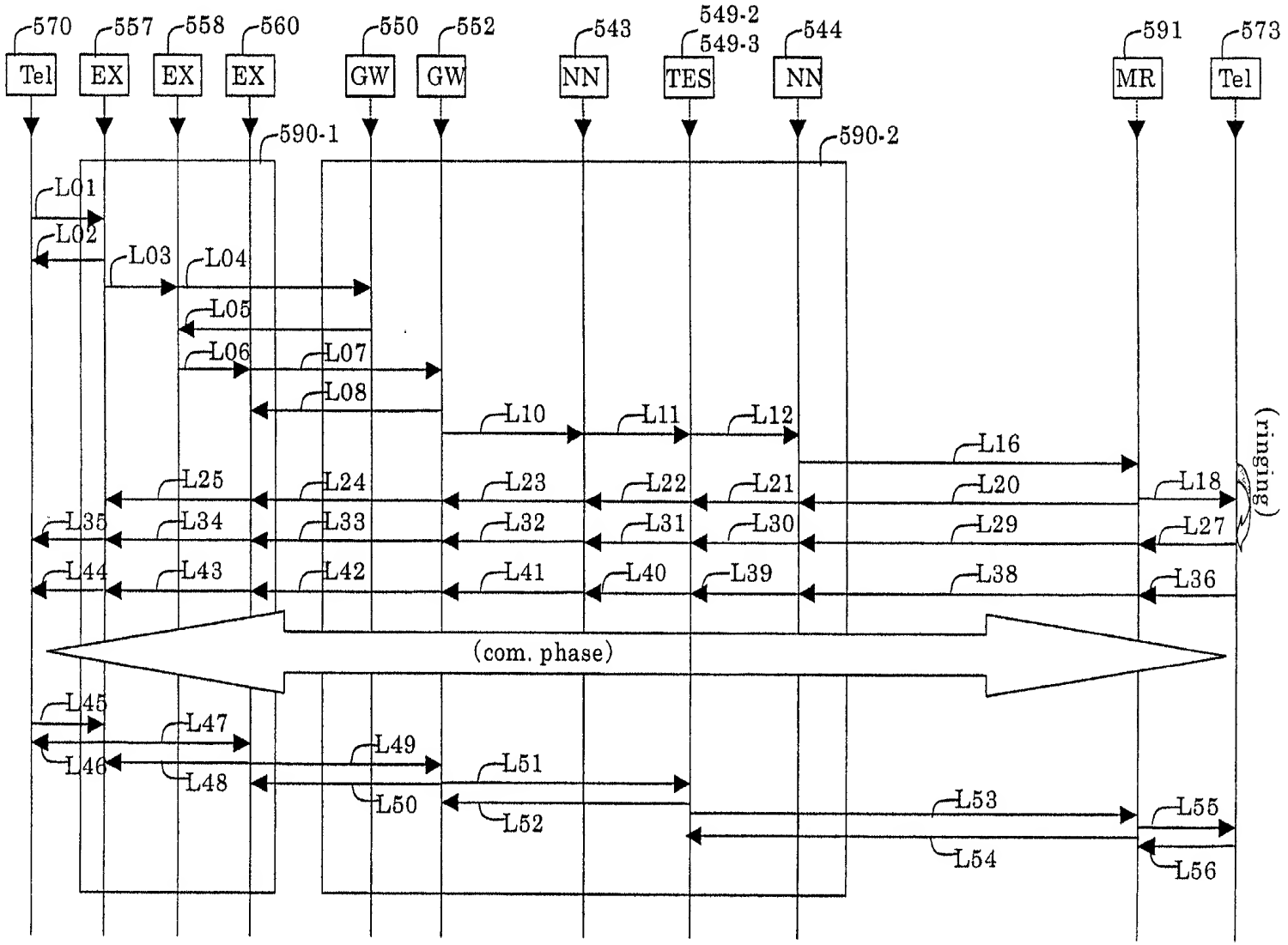


FIG.210

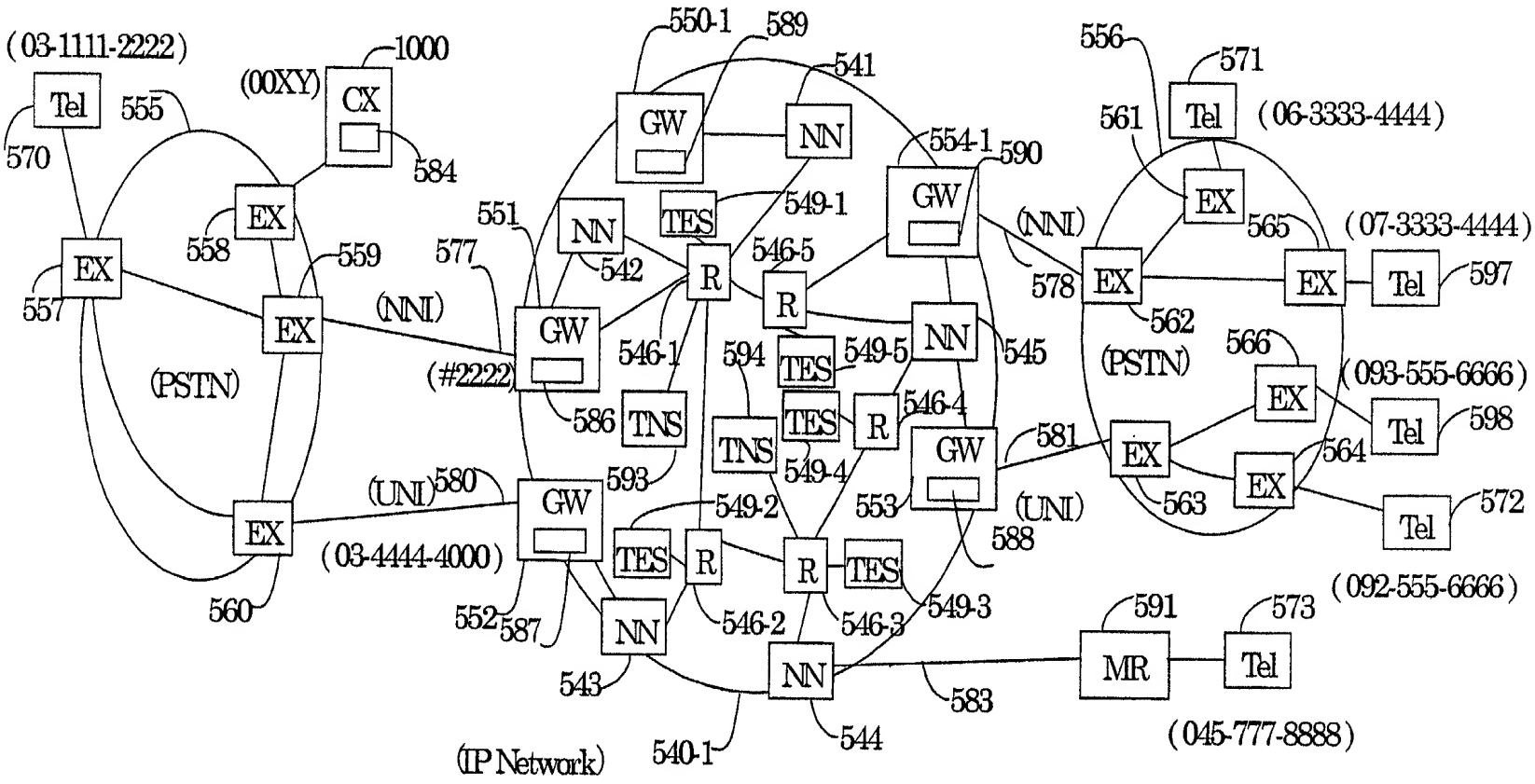

(03-1111-2222)
Tel
570
555
(00XY)
CX
1000
584
EX
558
559
EX
557
EX
(NNI)
(PSTN)
EX
560
(UNI)
580
(03-4444-4000)
GW
(#2222)
586
TNS
593
GW
552
587
NN
543
(IP Network)
550-1
589
541
GW
NN
551
NN
542
TES
549-1
577
R
546-5
546-1
R
TES
549-5
NN
545
TNS
549-4
TES
R
546-4
TNS
549-2
TES
R
R
TES
549-3
546-2
546-3
NN
540-1
544
GW
553
588
554-1
590
GW
(NNI)
578
581
(UNI)
556
571
Tel
(06-3333-4444)
561
EX
565
(07-3333-4444)
EX
562
EX
Tel
597
(PSTN)
566
EX
(093-555-6666)
Tel
598
EX
564
563
EX
Tel
572
(092-555-6666)
591
573
MR
Tel
583
(045-777-8888)

FIG.211

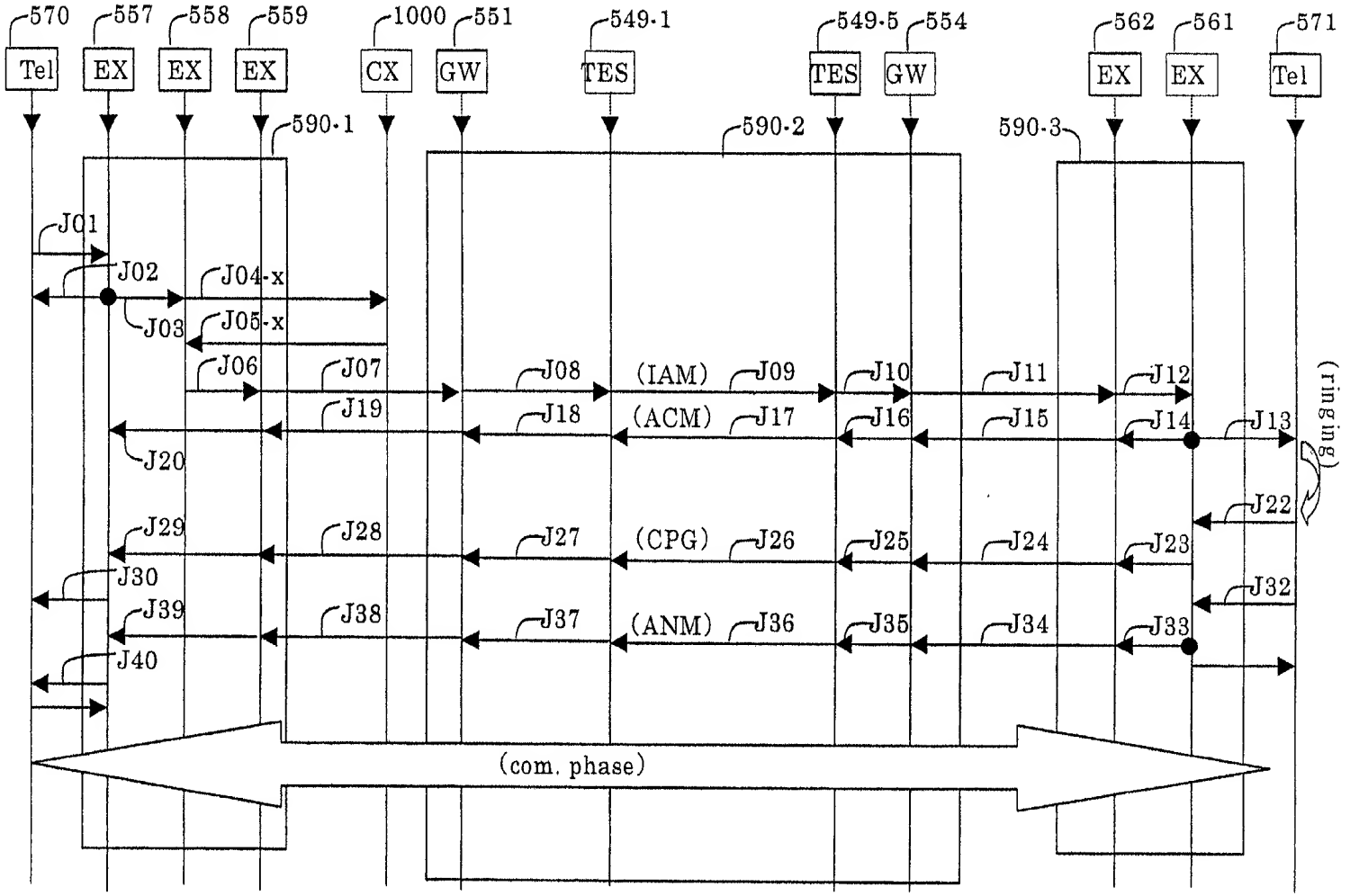

570
557
558
559
1000
551
549-1
549-5
554
562
561
571
Tel
EX
EX
EX
CX
GW
TES
TES
GW
EX
EX
Tel
590-1
590-2
590-3
J01
J02
J04-x
J03
J05-x
J06
J07
J08
(IAM)
J09
J10
J11
J12
J19
J18
(ACM)
J17
J16
J15
J14
J13
(ringing)
J20
J22
J29
J28
J27
(CPG)
J26
J25
J24
J23
J30
J32
J39
J38
J37
(ANM)
J36
J35
J34
J33
J40
(com. phase)

FIG.212

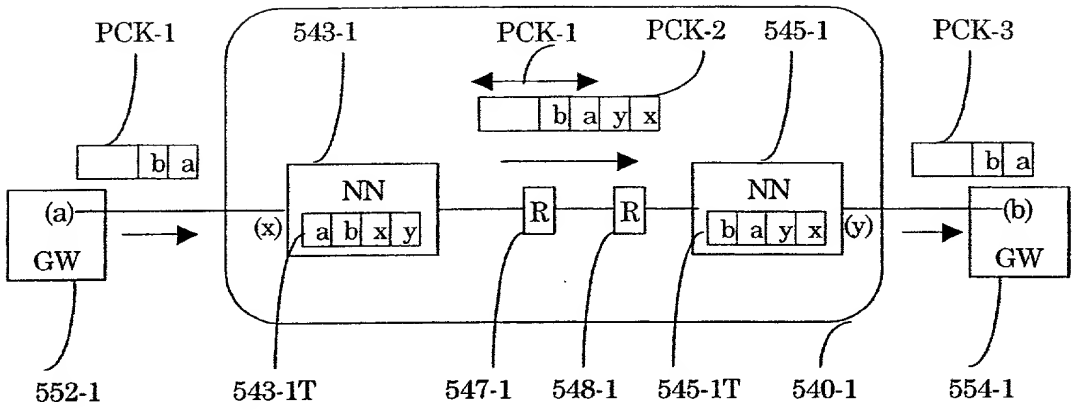
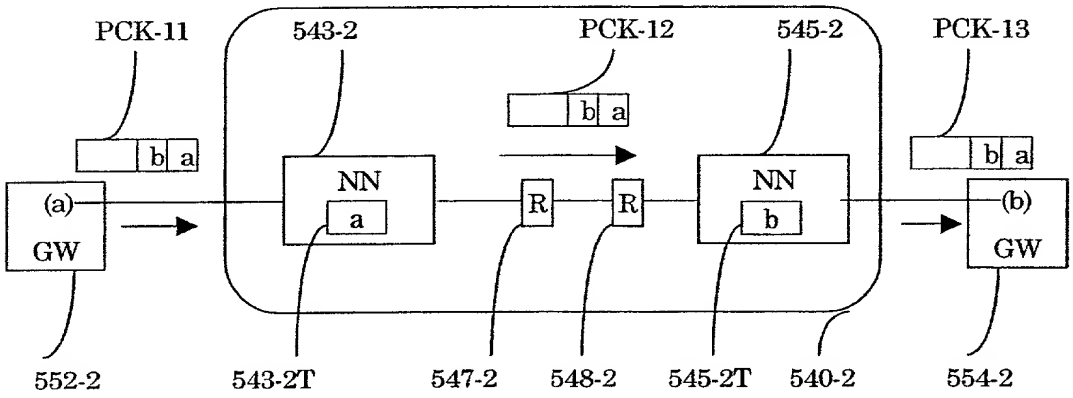


FIG.213



TO2880 "2922860

FIG.214

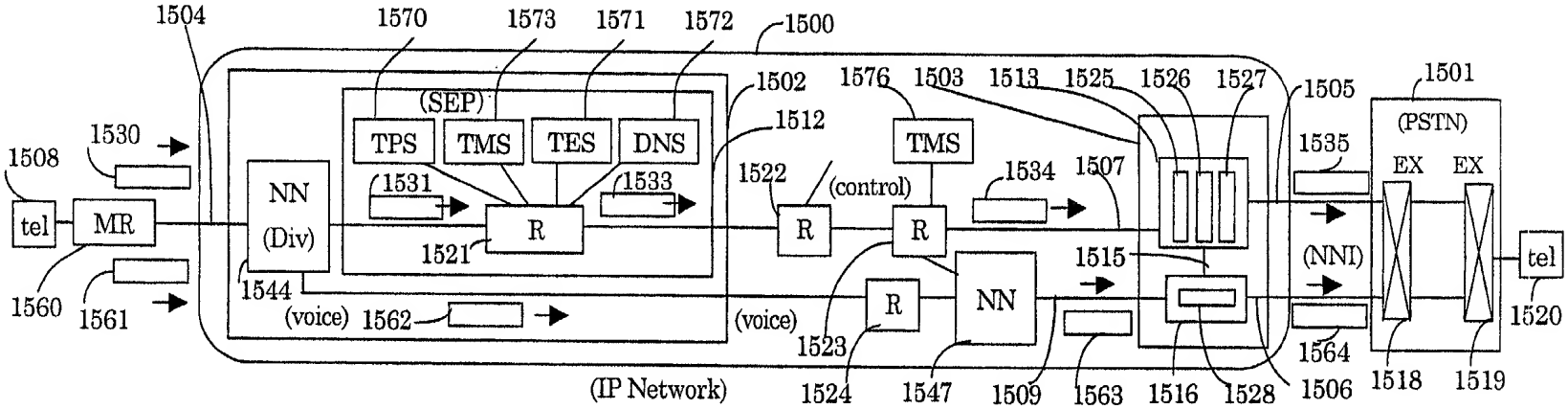


FIG.215

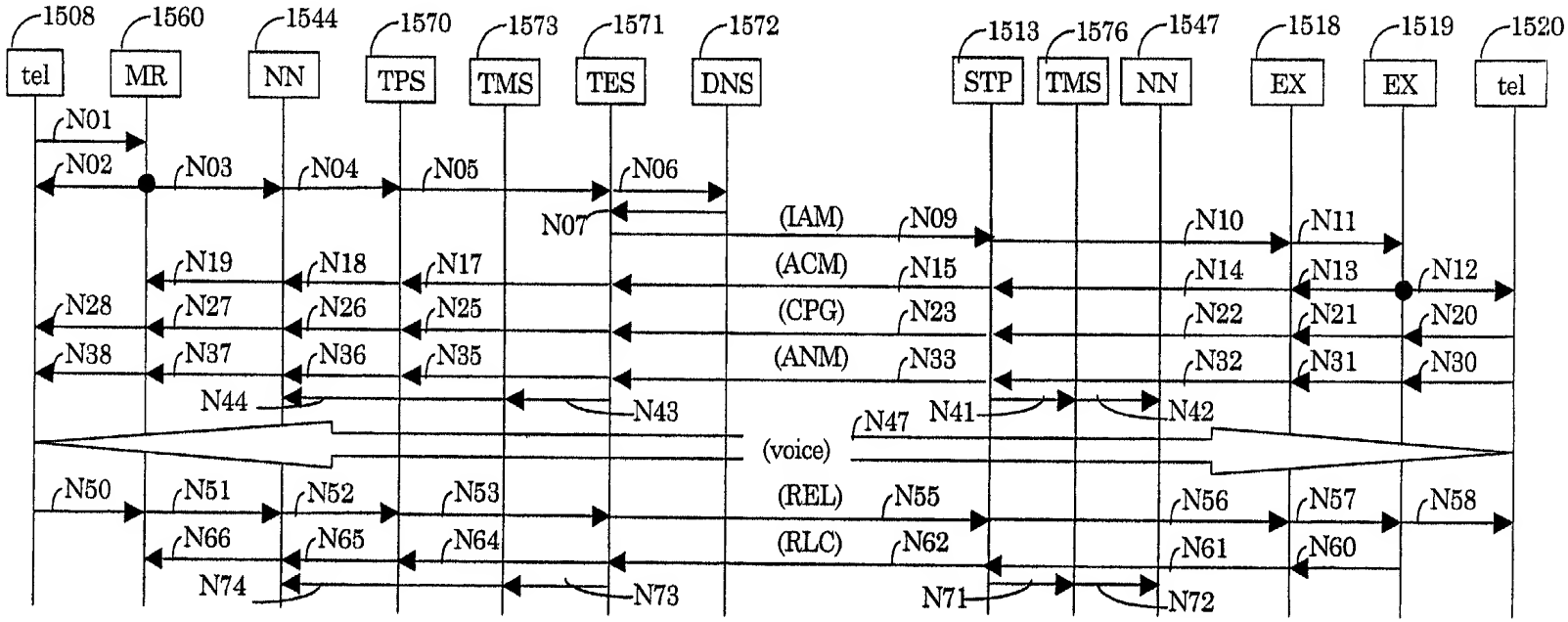


FIG.216

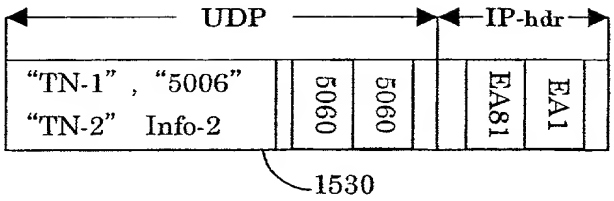


FIG.217

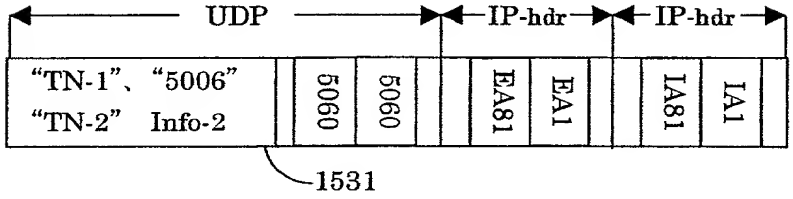


FIG.218

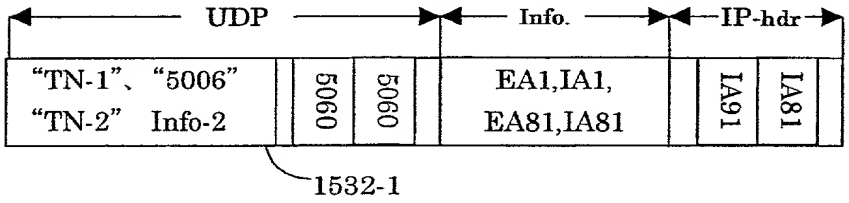


FIG.219

1571-1

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	Voice Port No.	TPS Address	Start Time	End Time
IA91		IAM	TN-1 TN-2	EA1,IA1	5006	EA81,IA 81	St2	
	. .	. .	. .	. .	. .		. .	. .

FIG.220

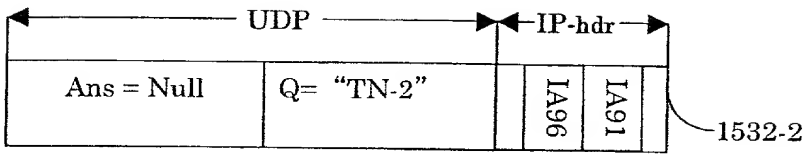


FIG.221

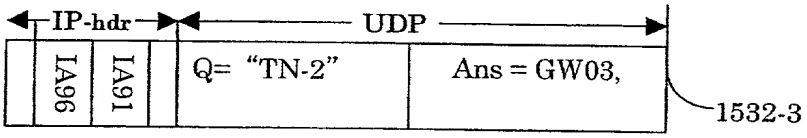


FIG.222

1571-2

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	Voice Port No.	TPS Address	Start Time	End Time
IA91 GW03	CIC-2	IAM	TN-1 TN-2	EA1,IA1	5006	EA81,IA81	St2	
	. .	. .	. .	. .	. .		. .	. .

FIG.223

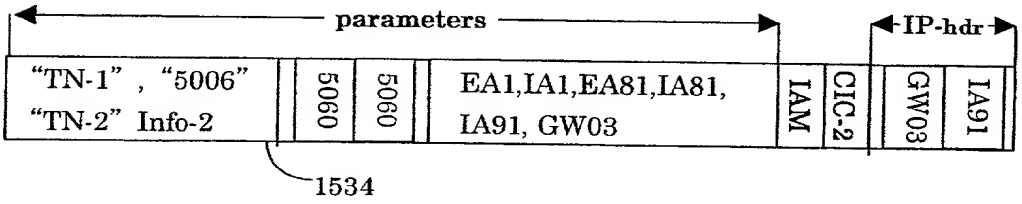


FIG.224

1513-1

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	Voice Port No.	TPS Address	Start Time	End Time
IA91 GW03	CIC-2	IAM	TN-1 TN-2	EA1,IA1	5006	EA81,IA81	St3	
	. .	. .	. .	. .	. .		. .	. .

FIG.225

1527

Range of Receiver Phone No.	Sig. Pt. Code
02-0000-0000～06-9999-9999	#1112
09-0000-0000～09-9999-9999	#1119
(default)	#1111

hex-decimal

FIG.226

1525-1

No.	PSTN1501				IPnet1500			MP-id
1	PC-3	PC-19	SLS-3	CIC-3	GW03	IA91	CIC-2	MP-7
2								

FIG.227

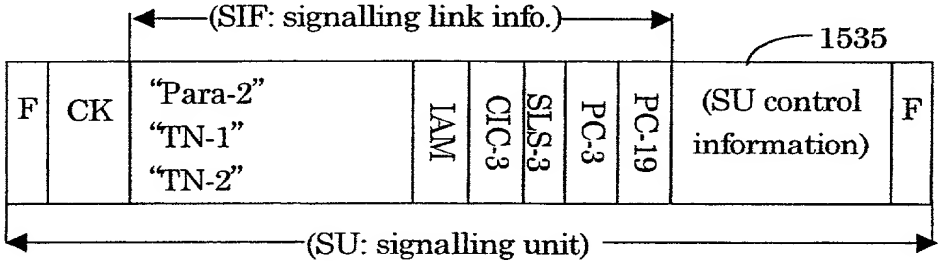


FIG.228

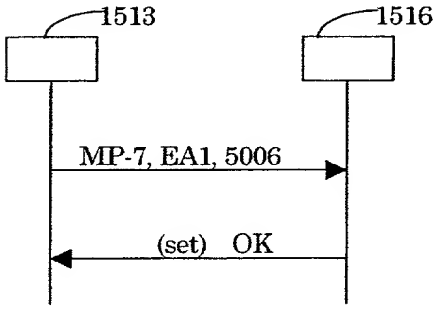


FIG.229

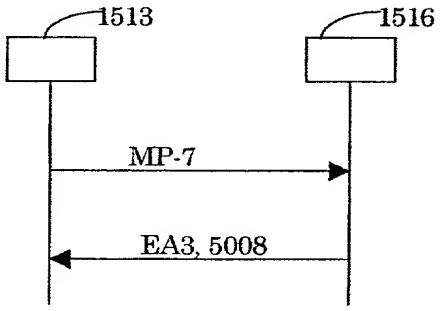


FIG.230

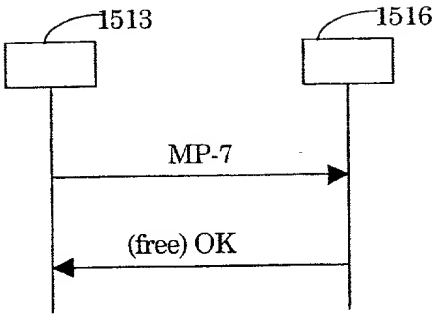


FIG.231

1528-1

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
Null	—	—	—	—	—	—
. .	. .	. .	. .	. .	. .	. .

Fig.232

1528-2

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-7			EA1	5006	CH-1	
. .	. .	. .	. .	. .	. .	. .

Fig.233

1528-3

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-7	EA3	5008	EA1	5006	CH-1	CH-2
. .	. .	. .	. .	. .	. .	. .

FIG.234

1513-2

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End Time
IA91 GW03	CIC-2	IAM	TN-1 TN-2	EA1,IA1 EA3,IA3	5006 5008	EA81,IA81	St3	
	. .	. .	. .	. .	. .		. .	. .

FIG.235

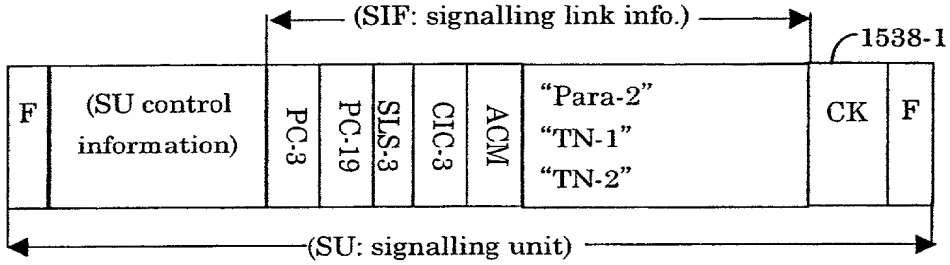


FIG.236

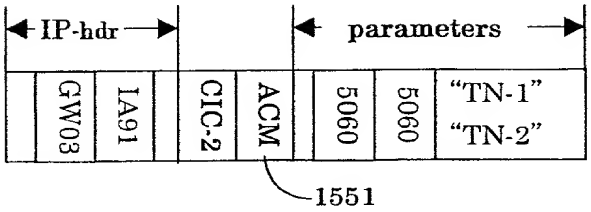


FIG.237

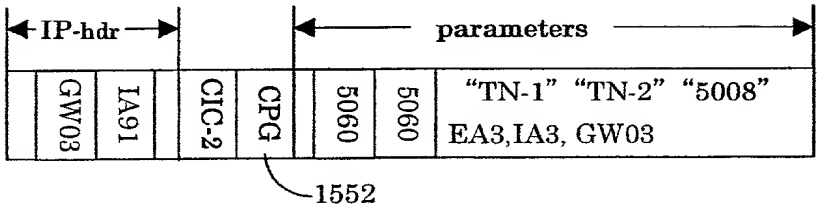


FIG.238

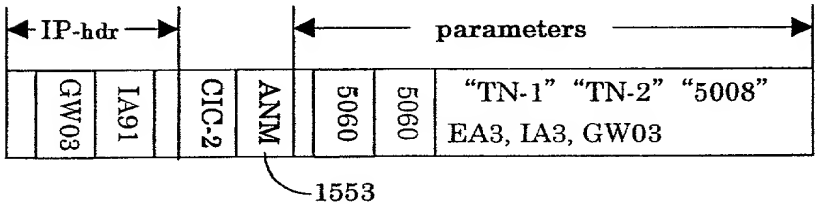


FIG.239

1513-3

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End Time
IA91 GW03	CIC-2	ANM	TN-1 TN-2	EA1,IA1 EA3,IA3	5006 5008	EA81,IA81	St3	
	. .	. .	. .	. .	. .		. .	. .

FIG.240

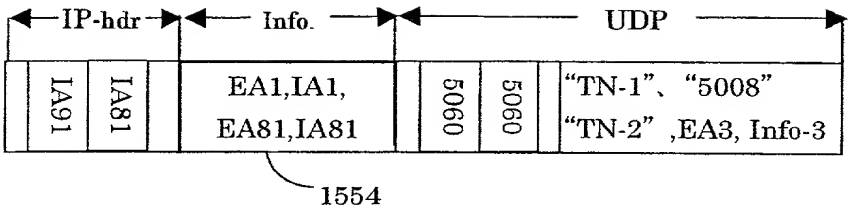


FIG.241

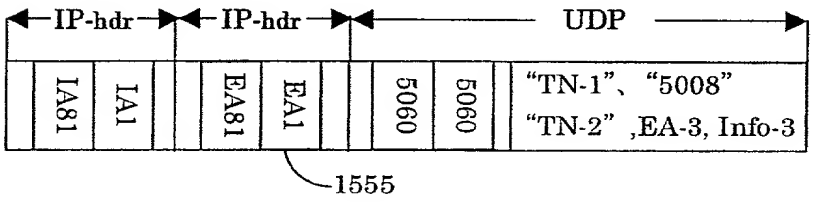


FIG.242

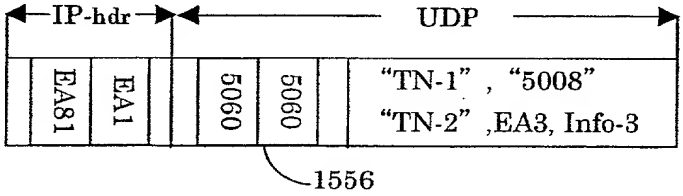


FIG.243

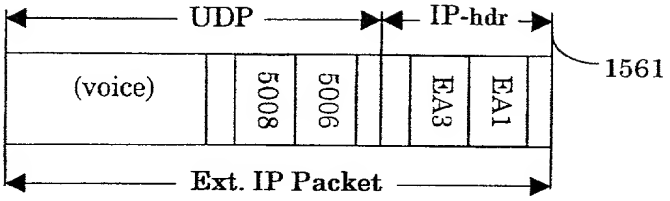


FIG.244

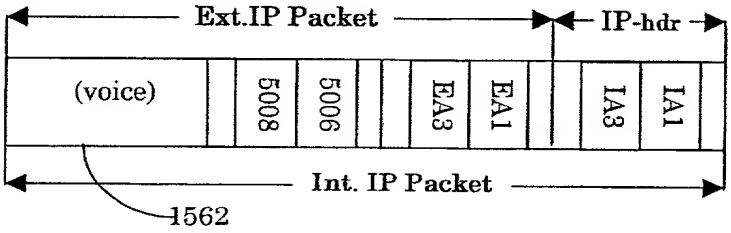


FIG.245

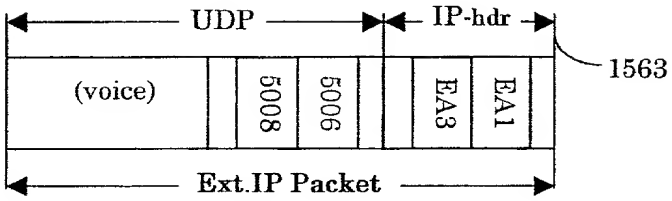


FIG.246

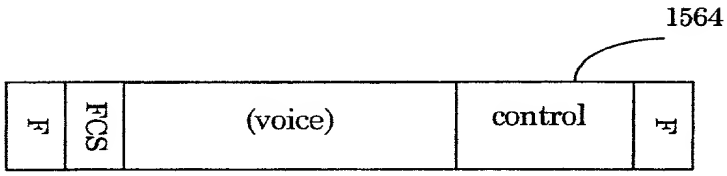


FIG.247

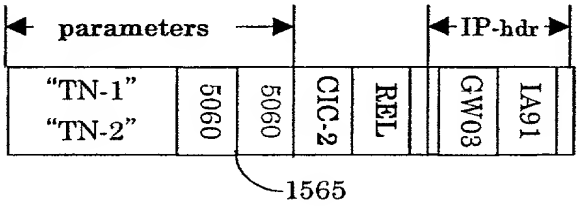


FIG.248

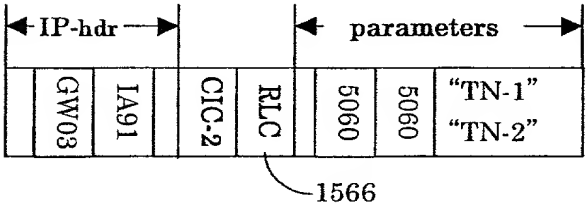


FIG.249

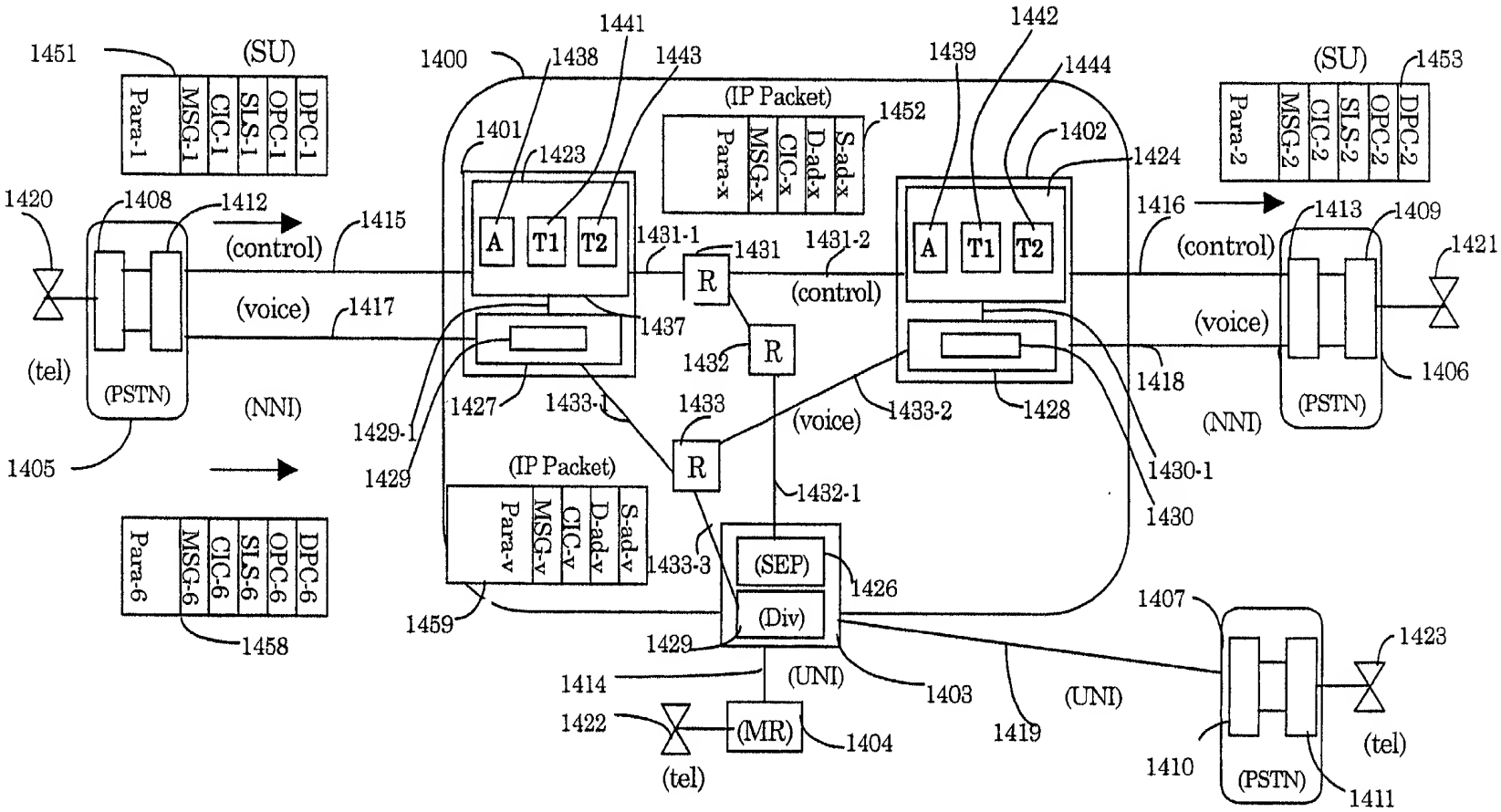

1451
(SU)
Para-1
MSG-1
CIC-1
SLS-1
OPC-1
DPC-1
1400
1438
1441
1443
1439
1442
1444
(IP Packet)
Para-x
MSG-x
CIC-x
D-ad-x
S-ad-x
1452
1401
1423
1402
1424
(SU)
1453
Para-2
MSG-2
CIC-2
SLS-2
OPC-2
DPC-2
1420
1408
1412
1415
1416
1413
1409
1421
(control)
A
T1
T2
1431-1
1431
1431-2
(control)
(voice)
1417
1437
1406
(tel)
(PSTN)
(NNI)
1427
1433-1
1433
1432
R
1418
1405
1429-1
1429
(IP Packet)
(voice)
1433-2
1428
1430-1
1430
Para-v
MSG-v
CIC-v
D-ad-v
S-ad-v
1432-1
1433-3
(SEP)
1426
1407
1459
(Div)
1429
1423
1414
(UNI)
1403
(UNI)
1419
1422
(MR)
1404
(tel)
1410
(PSTN)
1411
(tel)
Para-6
MSG-6
CIC-6
SLS-6
OPC-6
DPC-6
1458

FIG.250

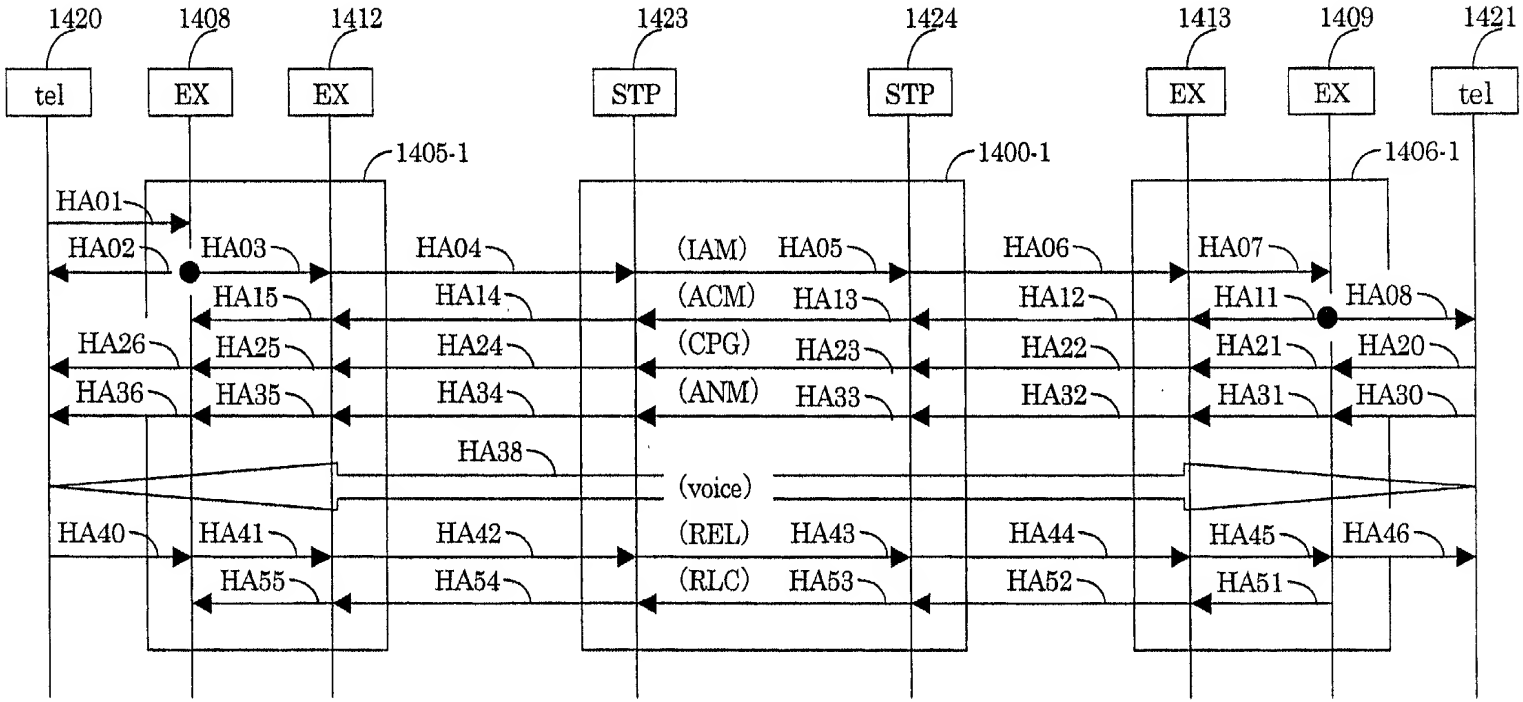

1420
1408
1412
1423
1424
1413
1409
1421
tel
EX
EX
STP
STP
EX
EX
tel
1405-1
1400-1
1406-1
HA01
HA02
HA03
HA04
(IAM)
HA05
HA06
HA07
HA15
HA14
(ACM)
HA13
HA12
HA11
HA08
HA26
HA25
HA24
(CPG)
HA23
HA22
HA21
HA20
HA36
HA35
HA34
(ANM)
HA33
HA32
HA31
HA30
HA38
(voice)
HA40
HA41
HA42
(REL)
HA43
HA44
HA45
HA46
HA55
HA54
(RLC)
HA53
HA52
HA51

FIG.251

1441-1

Range of Receiver Phone No.	Range of IP Address
06-0000-0000～06-9999-9999	10.240.240.1～10.240.240.2
092-000-0000～092-999-9999	10.240.241.1～10.240.241.1
045-777-8880～045-777-8890	10.241.1.1 ～ 10.241.1.3
(default)	10.242.1.1

FIG.252

1441-2

Range of Receiver Phone No.	Sig. Pt. Code
06-0000-0000～06-9999-9999	#1111
092-000-0000～092-999-9999	#1122
045-777-8880～045-777-8890	#3344
(default)	#1113

hex-decimal

FIG.253

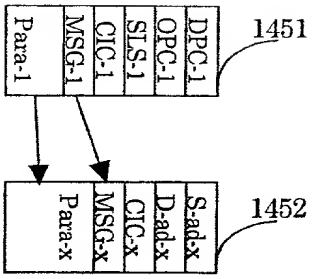
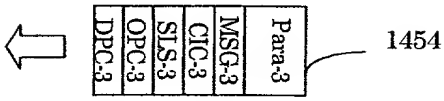


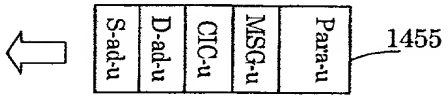
FIG.254



(DPC-3=OPC-2, OPC-3=DPC-2)

(SLS-3=SLS-2,CIC-3=CIC-2,MSG-=ACM)

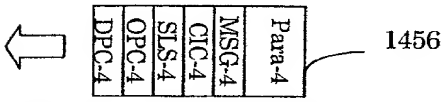
FIG.255



(S-ad-u=D-ad-x, D-ad-u=S-ad-x)

(CIC-u= CIC-x, MSG-u=ACM)

FIG.256



(DPC-4=OPC-1, OPC-4=DPC-1)

(SLS-4=SLS-1,CIC-4=CIC-1, MSG-4=ACM)

FIG.257

1423-1

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End time
GW05	CIC-2	IAM	TN-1 TN-2	EA5,IA5	5010		St5	
	. .	. .	. .	. .	. .		. .	. .

FIG.258

1424-1

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End Time
GW06 GW05	CIC-2	ANM	TN-1 TN-2	EA5,IA5	5010		St6	
	. .	. .	. .	. .	. .		. .	. .

FIG.259

1424-2

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End Time
GW06 GW05	CIC-2	CPG	TN-1 TN-2	EA6,IA6 EA5,IA5	5012 5010		St6	
	. .	. .	. .	. .	. .		. .	. .

FIG.260

1423-2

Adr. for Call Control	CIC No.	Step	Phone No.	Address for User	User Port No.	TPS Address	Start Time	End Time
GW05 GW06	CIC-2	CPG	TN-1 TN-2	EA5,IA5 EA6,IA6	5010 5012		St5	
	. .	. .	. .	. .	. .		. .	. .

FIG.261

1438-1

No.	PSTN1405				IPnet1400			MP-id
1								
2								

FIG.262

1438-2

No.	PSTN1405				IPnet1400			MP-id
1	DPC-1	OPC-1	SLS-1	CIC-1	S-ad-x	D-ad-x	CIC-x	MP-8
2								

FIG.263

1439-1

No.	PSTN1406				IPnet1400			MP-id
1								
2								

FIG.264

1439-2

No.	PSTN1406				IPnet1400			MP-id
1	OPC-2	DPC-2	SLS-2	CIC-2	D-ad-x	S-ad-x	CIC-x	MP-9
2								

FIG.265

1429-1

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-8	EA5	5010			CH-1	CH-2
. .	. .	. .	. .	. .	. .	. .

FIG.266

1430-1

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-9	EA6	5012	EA5	5010	CH-3	CH-4
. .	. .	. .	. .	. .	. .	. .

FIG.267

1429-2

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-8	EA5	5010	EA6	5012	CH-1	CH-2
. .	. .	. .	. .	. .	. .	. .

FIG.268

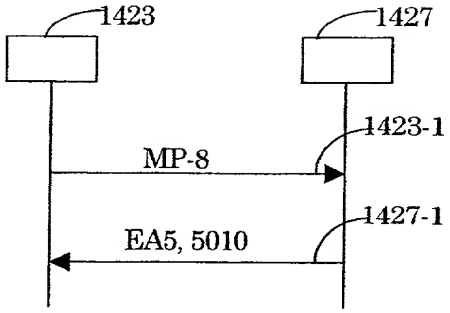


FIG.269

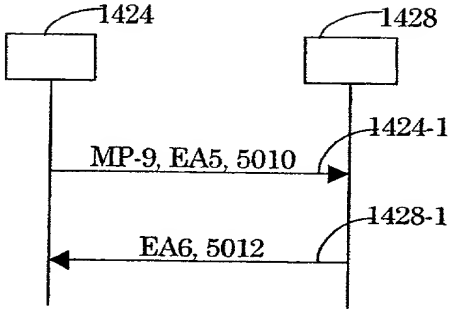


FIG.270

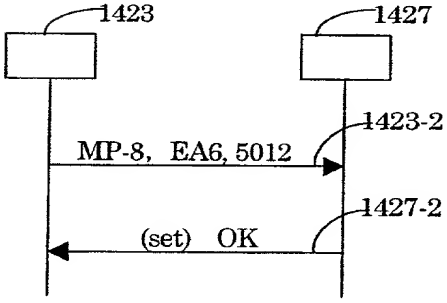


FIG.271

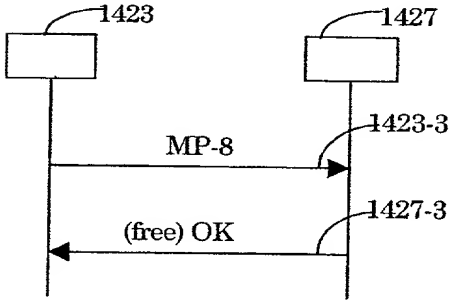


FIG.272

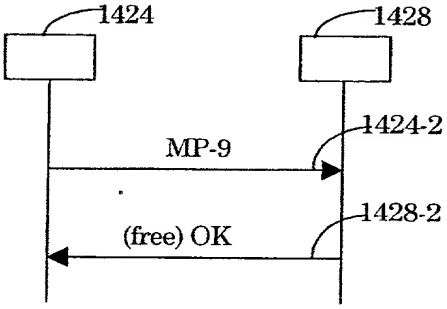


FIG.273

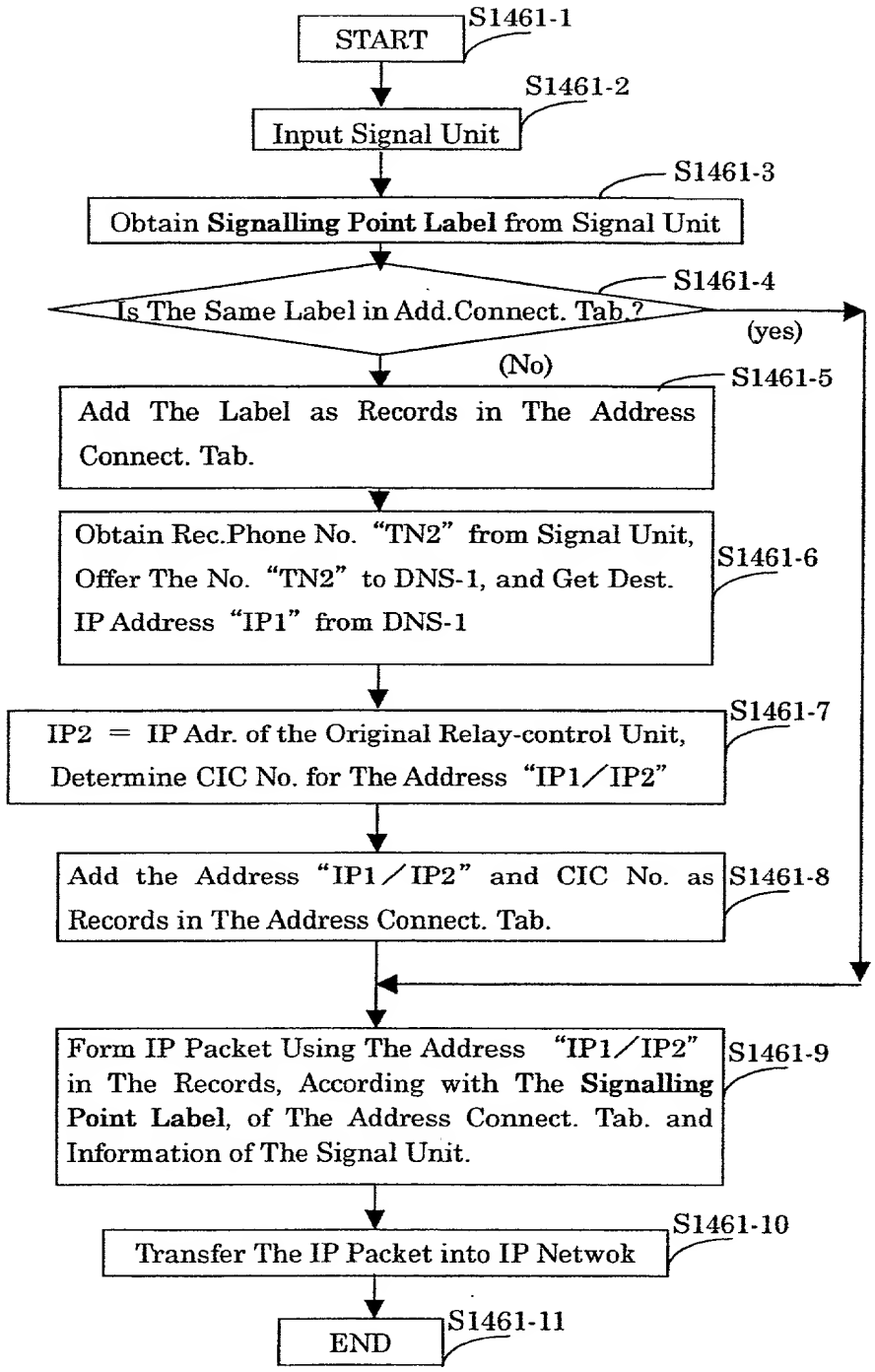

START
S1461-1
Input Signal Unit
S1461-2
Obtain Signalling Point Label from Signal Unit
S1461-3
Is The Same Label in Add.Connect. Tab.?
S1461-4
(yes)
(No)
Add The Label as Records in The Address Connect. Tab.
S1461-5
Obtain Rec.Phone No. "TN2" from Signal Unit, Offer The No. "TN2" to DNS-1, and Get Dest. IP Address "IP1" from DNS-1
S1461-6
IP2 = IP Adr. of the Original Relay-control Unit, Determine CIC No. for The Address "IP1/IP2"
S1461-7
Add the Address "IP1/IP2" and CIC No. as Records in The Address Connect. Tab.
S1461-8
Form IP Packet Using The Address "IP1/IP2" in The Records, According with The Signalling Point Label, of The Address Connect. Tab. and Information of The Signal Unit.
S1461-9
Transfer The IP Packet into IP Netwok
S1461-10
END
S1461-11

FIG.274

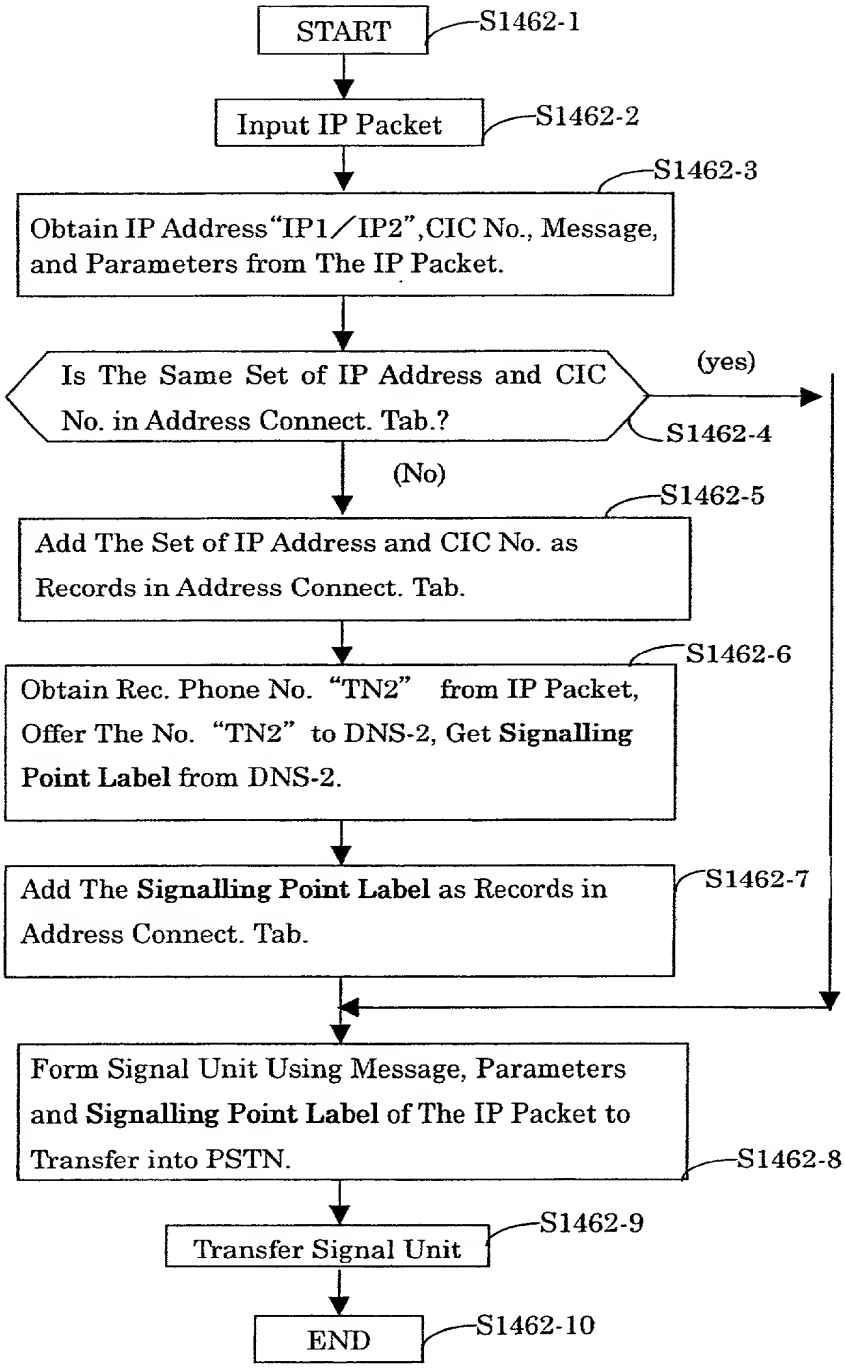

START
S1462-1
Input IP Packet
S1462-2
S1462-3
Obtain IP Address"IP1/IP2",CIC No., Message, and Parameters from The IP Packet.
Is The Same Set of IP Address and CIC No. in Address Connect. Tab.?
(yes)
S1462-4
(No)
S1462-5
Add The Set of IP Address and CIC No. as Records in Address Connect. Tab.
S1462-6
Obtain Rec. Phone No. "TN2" from IP Packet, Offer The No. "TN2" to DNS-2, Get Signalling Point Label from DNS-2.
Add The Signalling Point Label as Records in Address Connect. Tab.
S1462-7
Form Signal Unit Using Message, Parameters and Signalling Point Label of The IP Packet to Transfer into PSTN.
S1462-8
Transfer Signal Unit
S1462-9
END
S1462-10

FIG.275

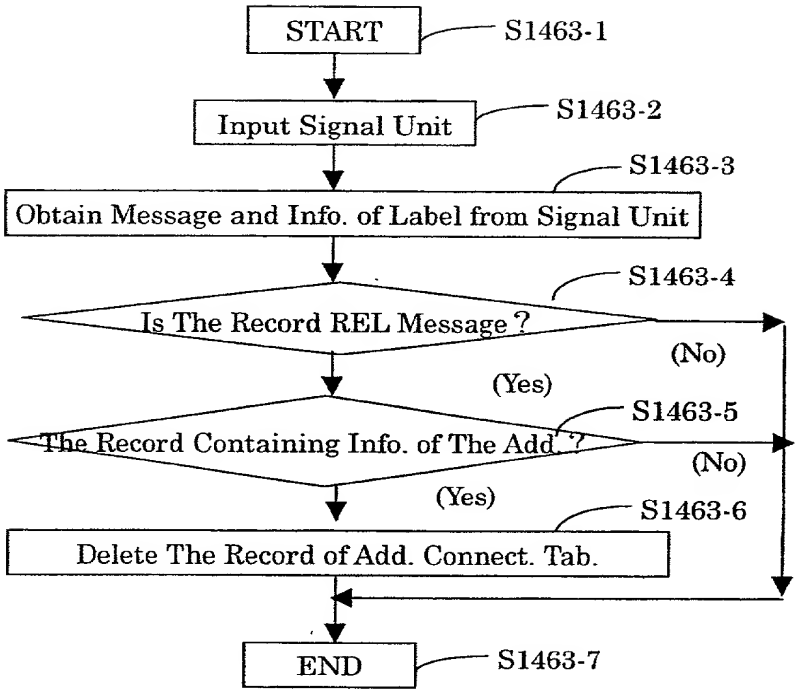


FIG.276

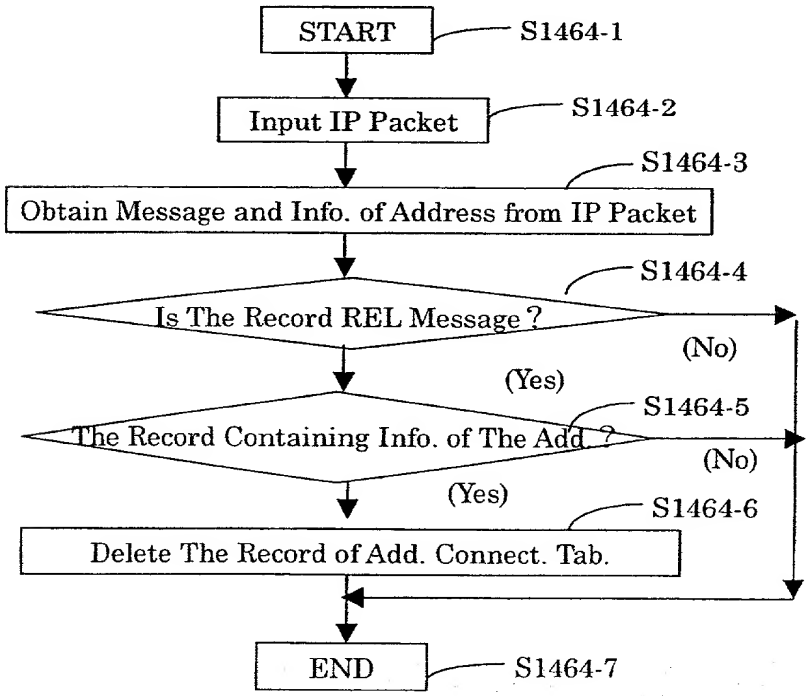


FIG.277

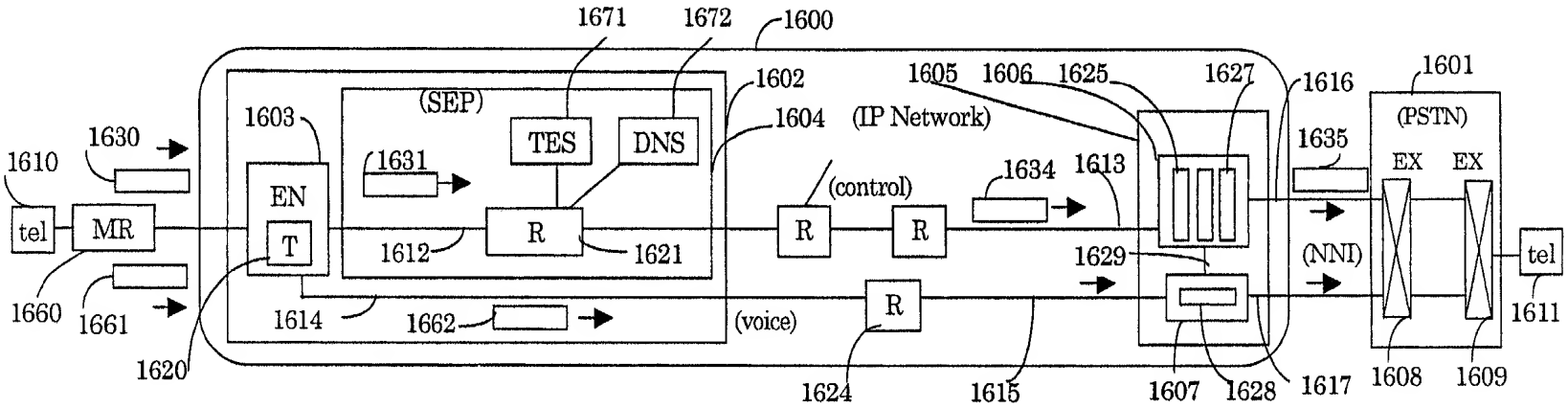


FIG.278

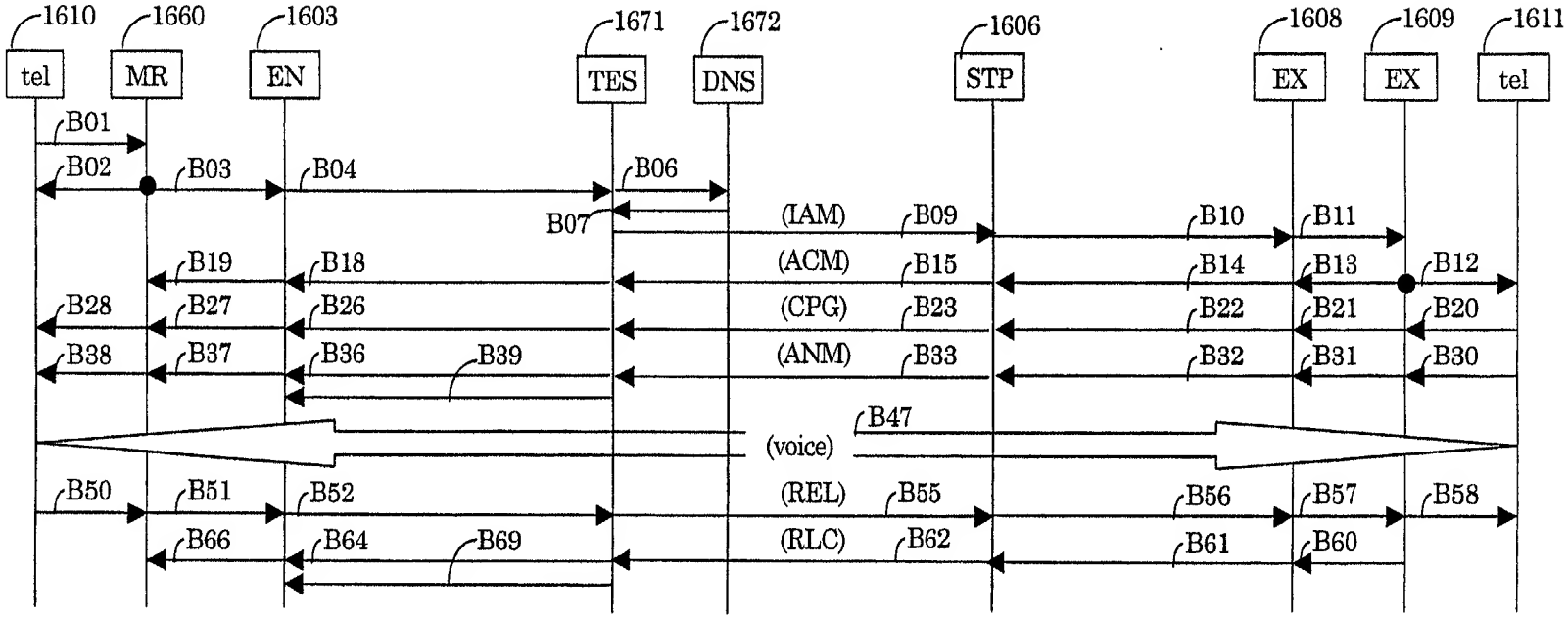


FIG.279

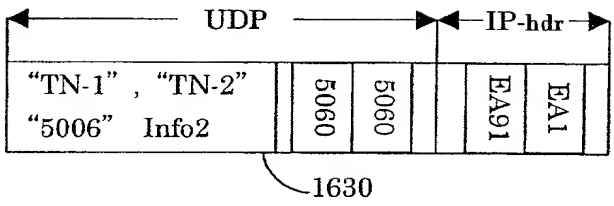


FIG.280

1620-1

Source IP address	Source Port No	Dest. IP address	Dest. Port No	Output I/F
EA1	5060	EA91	5060	IF1612
EA23	5060	EA91	5060	IF1612
Null				
· ·				

FIG.281

1671-1

Adr.for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No.	Start Time	End Time
IA91		IAM	TN-1 TN-2	EA1	5006	St6	
	· ·	· ·	· ·	· ·	· ·	· ·	· ·

FIG.282

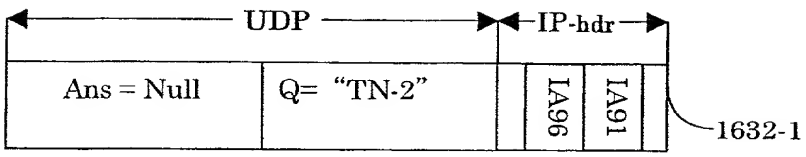


FIG.283

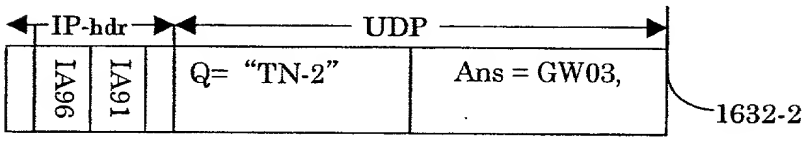


FIG.284

1671-2

Adr. for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No.	Start Time	End Time
IA91 GW03	CIC-2	IAM	TN-1 TN-2	EA1	5006	St6	
	. .	. .	. .	. .	. .	. .	. .

FIG.285

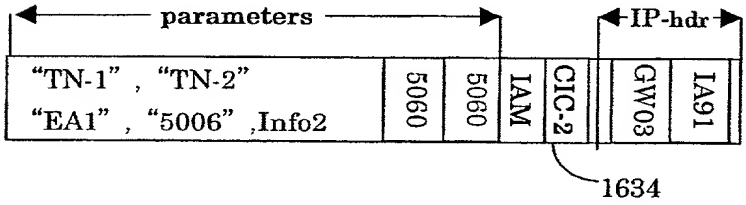


FIG.286

1605-1

Adr. for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No.	Start Time	End Time
IA91 GW03	CIC-2	IAM	TN-1 TN-2	EA1	5006	St7	
	. .	. .	. .	. .	. .	. .	. .

FIG.287

1627

Range of Receiver Phone No.	Sig. Pt. Code
02-0000-0000～06-9999-9999	#1102
09-0000-0000～09-9999-9999	#1109
(default)	#1101

hex-decimal

FIG.288

1625-1

No.	PSTN1601				IPnet1600			MP-id
1	PC-3	PC-09	SLS-3	CIC-3	GW03	IA91	CIC-2	MP-7
2								

FIG.289

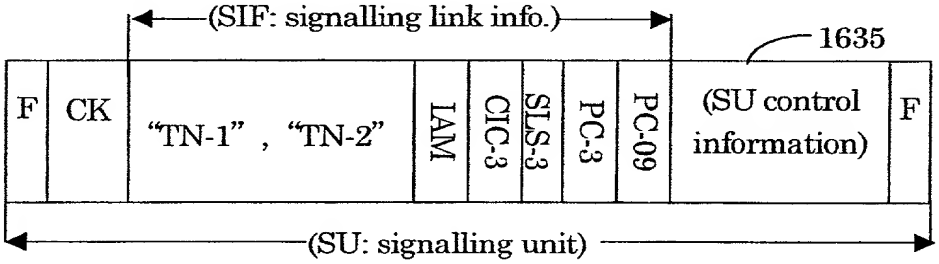


FIG.290

1628-1

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-7			EA1	5006	CH-1	
. .	. .	. .	. .	. .	. .	. .

FIG.291

1628-2

MP-id	IP-addr-d	Port-d	IP-addr-o	Port-o	Channel-S	Channel-R
MP-7	EA7	5008	EA1	5006	CH-1	CH-2
. .	. .	. .	. .	. .	. .	. .

FIG.292

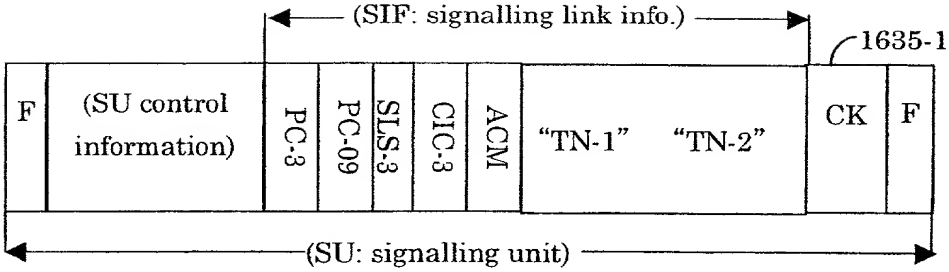


FIG.293

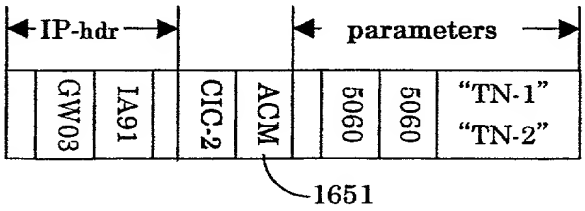


FIG.294

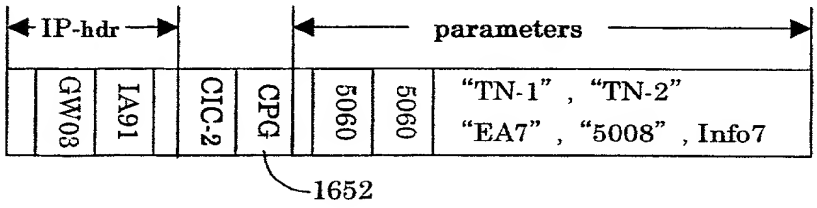


FIG.295

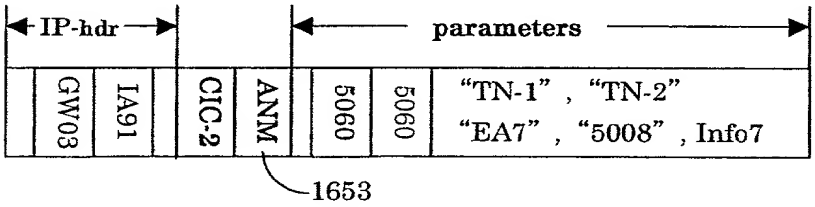


FIG.296

1605-2

Adr. for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No.	Start Time	End Time
IA91 GW03	CIC-2	ANM	TN-1 TN-2	EA1 EA7	5006 5008	St7	
	. .	. .	. .	. .	. .	. .	. .

FIG.297

1671-3

Adr. for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No.	Start Time	End Time
IA91 GW03	CIC-2	ANM	TN-1 TN-2	EA1 EA7	5006 5008	St6	
	. .	. .	. .	. .	. .	. .	. .

FIG.298

1620-2

Source IP address	Source Port No	Dest. IP address	Dest. Port No	Output I/F
EA1	5060	EA91	5060	IF1612
EA23	5060	EA91	5060	IF1612
EA1	5006	EA7	5008	IF1614
Null				
. .				

FIG.299

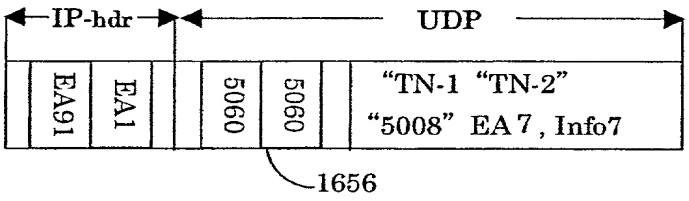


FIG.300

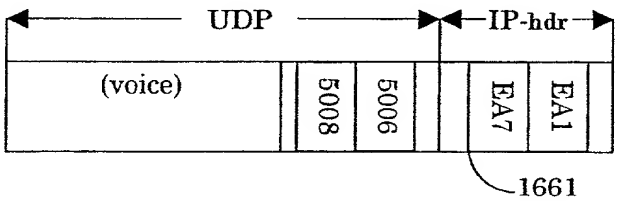


FIG.301

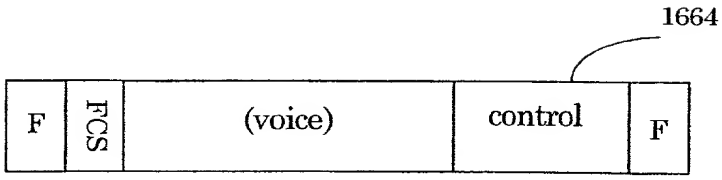


FIG.302

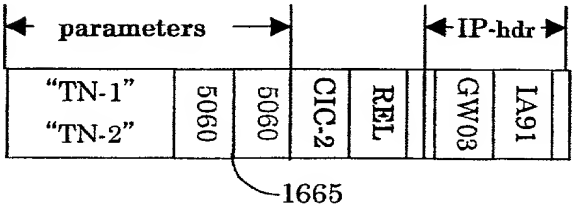


FIG.303

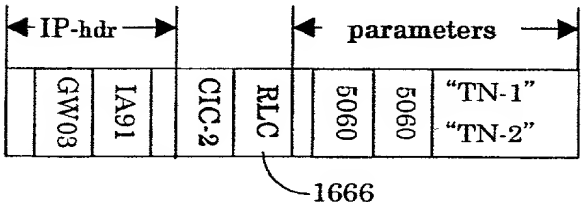


FIG.304

1620-3

Output I/F	Port No
IF1612	5060
IF1614	From 5004 to5048,
. .	. .

FIG.305

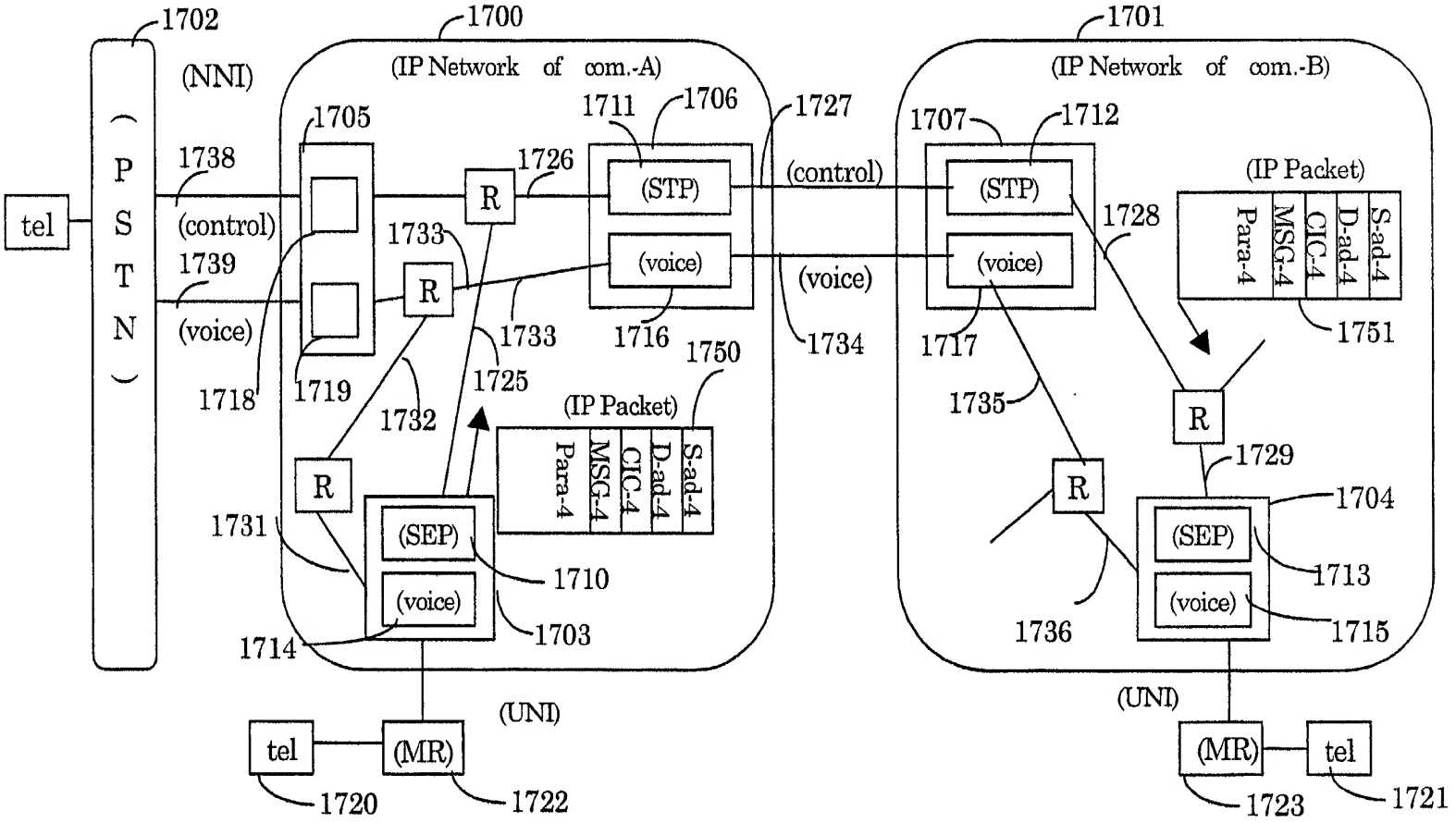

1702
(NNI)
1700
(IP Network of com.-A)
1701
(IP Network of com.-B)
tel
P S T N
1738
(control)
1739
(voice)
1705
1718
1719
R
1726
1733
1732
1725
(STP)
(voice)
1711
1706
1716
1727
(control)
(voice)
1734
1707
1712
1717
1728
1735
(IP Packet)
Para-4
MSG-4
CIC-4
D-ad-4
S-ad-4
1751
1750
1731
(SEP)
(voice)
1710
1703
1714
1729
1704
1713
1715
1736
(UNI)
(MR)
1720
1722
1723
1721

FIG.306

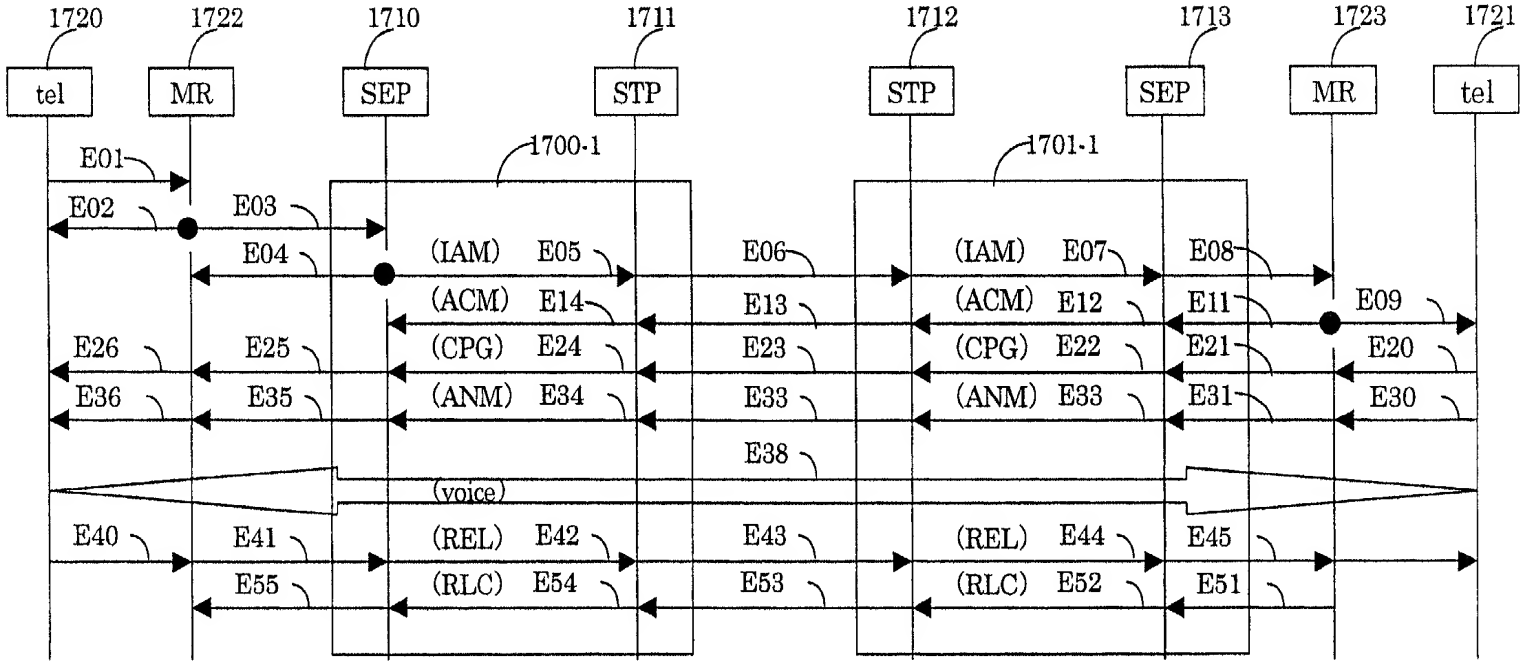

1720
1722
1710
1711
1712
1713
1723
1721
tel
MR
SEP
STP
STP
SEP
MR
tel
1700-1
1701-1
E01
E02
E03
E04
(IAM) E05
E06
(IAM) E07
E08
(ACM) E14
E13
(ACM) E12
E11
E09
E26
E25
(CPG) E24
E23
(CPG) E22
E21
E20
E36
E35
(ANM) E34
E33
(ANM) E33
E31
E30
E38
(voice)
E40
E41
(REL) E42
E43
(REL) E44
E45
E55
(RLC) E54
E53
(RLC) E52
E51

FIG.307

Address for Call Control	CIC No.	Step	Phone No.	Ext. IP Address	Port No. (1711-1)	Start Time	End Time
D-ad-4 S-ad-4	CIC-4	IAM	TN-1 TN-2	EA1722	5014	St5	

FIG.308

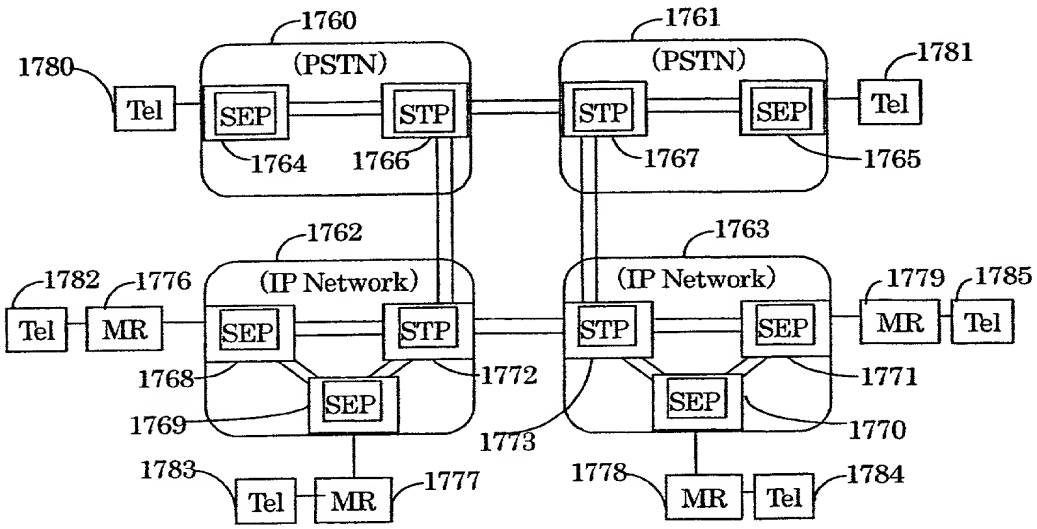
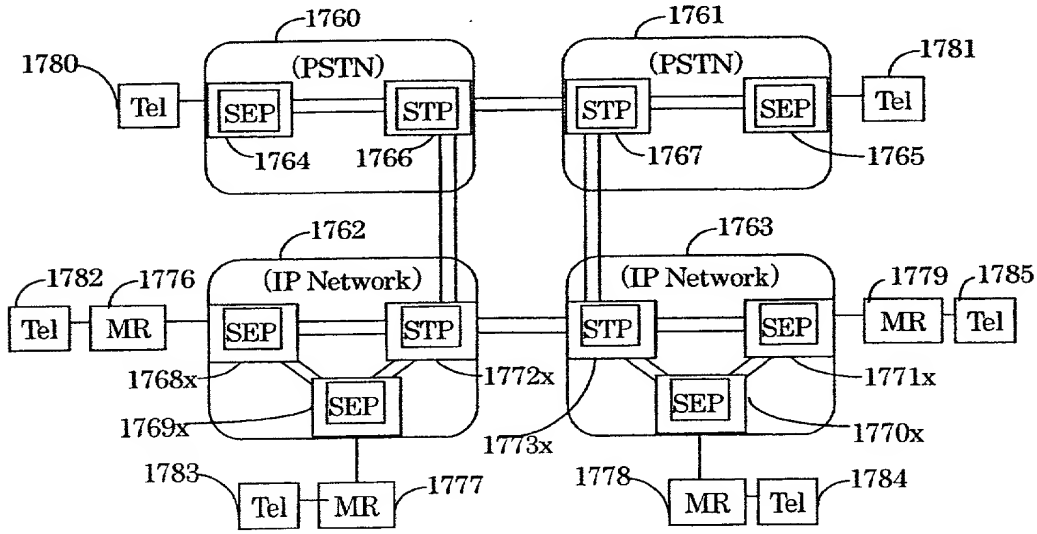


FIG.309



TD2280 '2922960

FIG.310

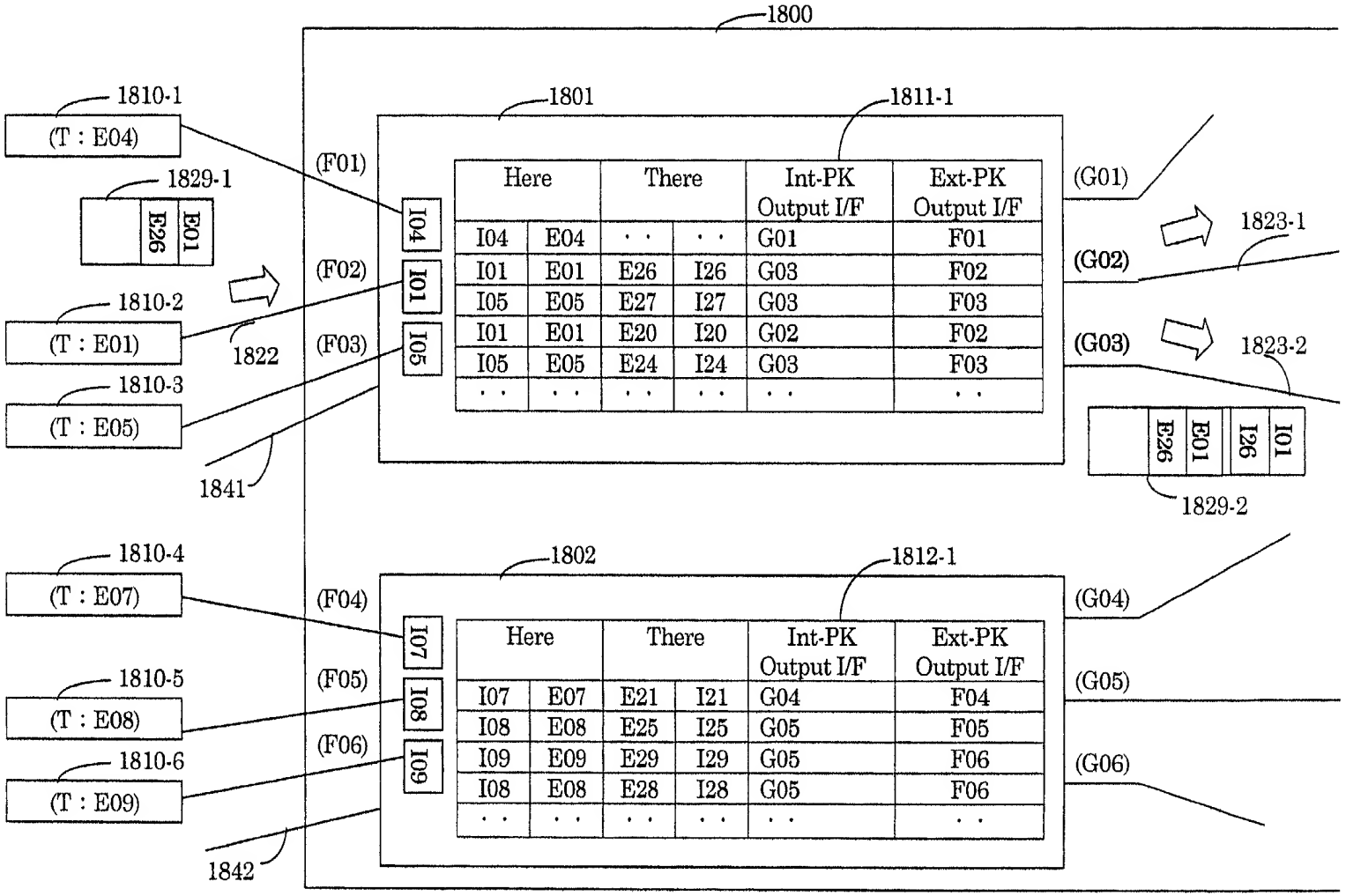
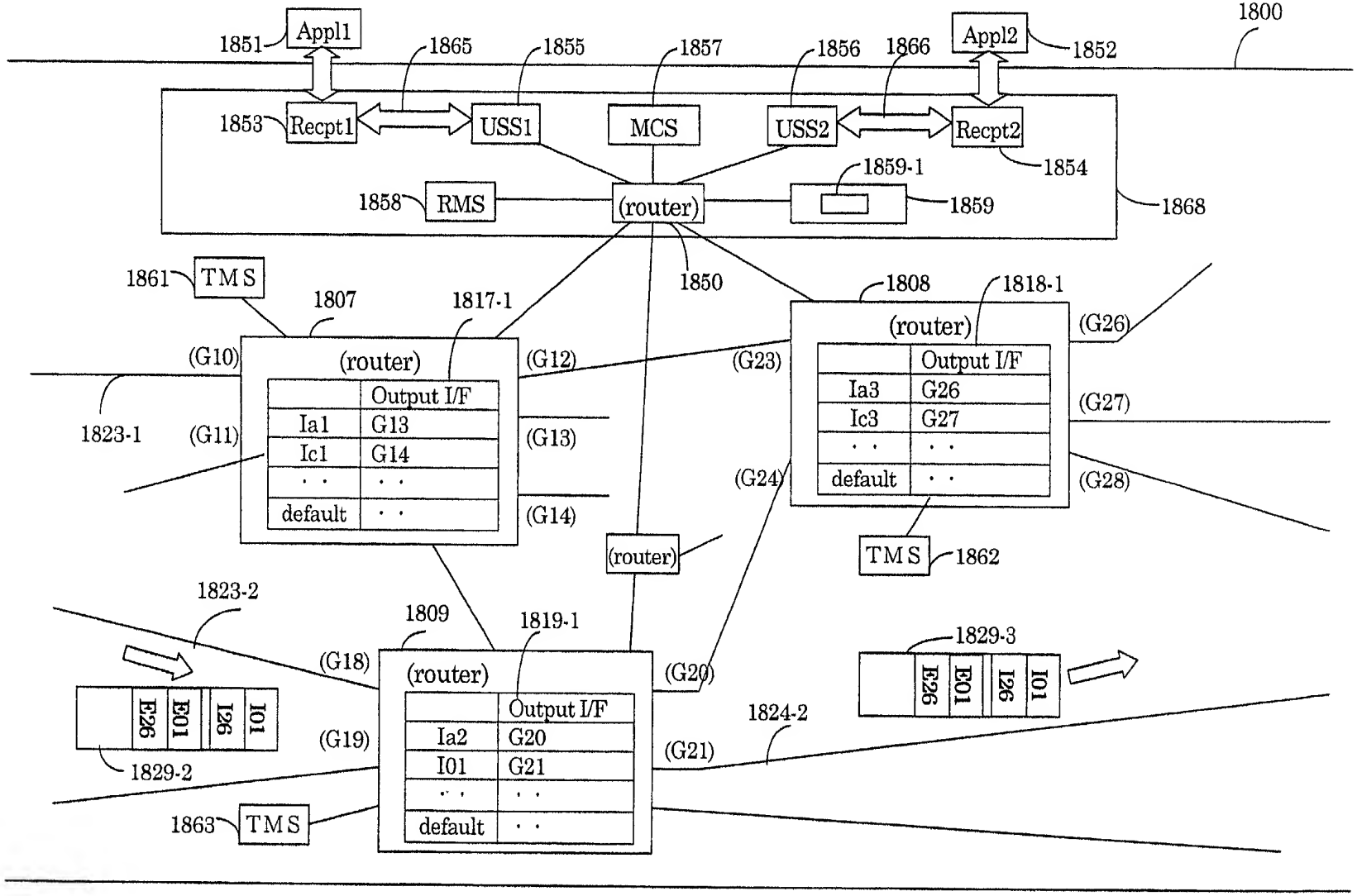


FIG.311


1800
1851
Appl1
1865
1855
1857
1856
1866
Appl2
1852
1853
Recpt1
USS1
MCS
USS2
Recpt2
1854
1859-1
1858
RMS
(router)
1859
1868
1861
TMS
1850
1807
1817-1
1808
1818-1
(router)
(G26)
(G10)
(G12)
(G23)
Output I/F
Ia3 G26
Ic3 G27
default
(G27)
1823-1
(G11)
Ia1 G13
Ic1 G14
(G13)
(G24)
(G28)
(G14)
(router)
TMS
1862
1823-2
1809
1819-1
1829-3
(G18)
(router)
(G20)
E26 E01 I26 I01
Output I/F
Ia2 G20
I01 G21
1824-2
(G19)
(G21)
1829-2
1863
TMS
default

TD2280 '2922860

FIG.312

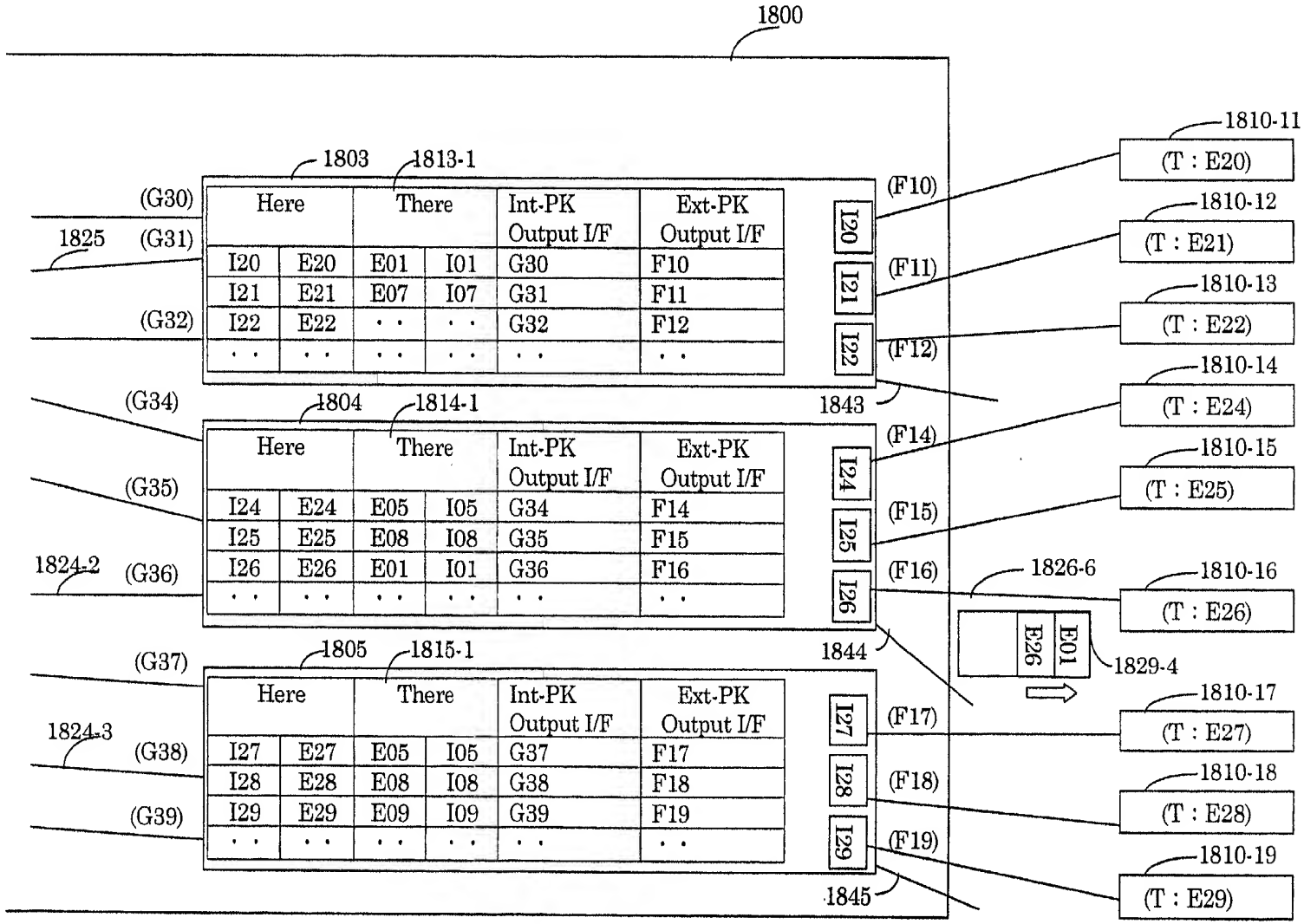


FIG.313

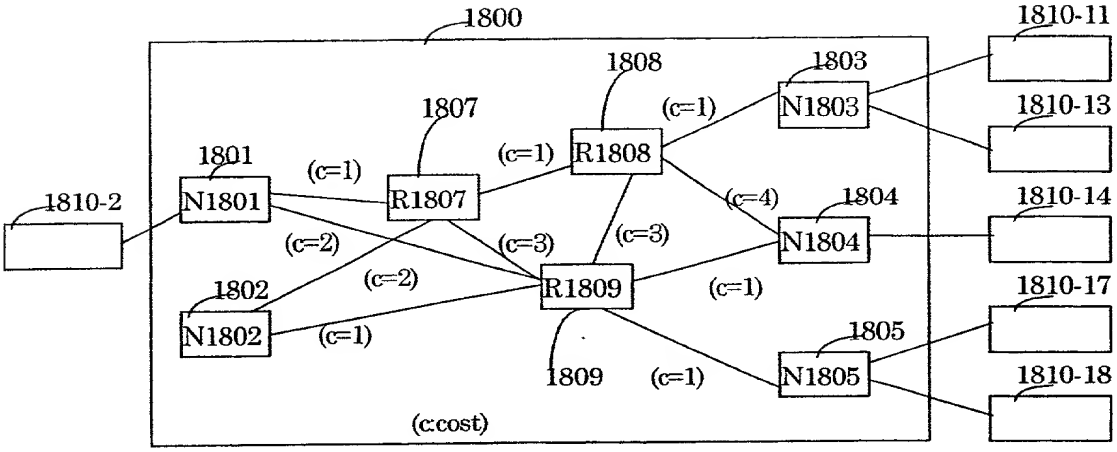


FIG.314

1869

	N1801	N1802	N1803	N1804	N1805	R1807	R1808	R1809	・
N1801						1		2	・
N1802						2		1	・
N1803							1		・
N1804							4	1	・
N1805								1	・
R1807	1	2					1	3	
R1808			1	4		1		3	・
R1809	2	1		1	1	3	3		
・・	・・	・・	・・	・・	・・	・・	・・	・・	・

(note: blank = no connection)

FIG.315

1870

N1801	T1810-2

FIG.316

1871

N1803	T1810-11、T1810-13
N1804	T1810-14
N1805	T1810-17、T1810-18

FIG.317

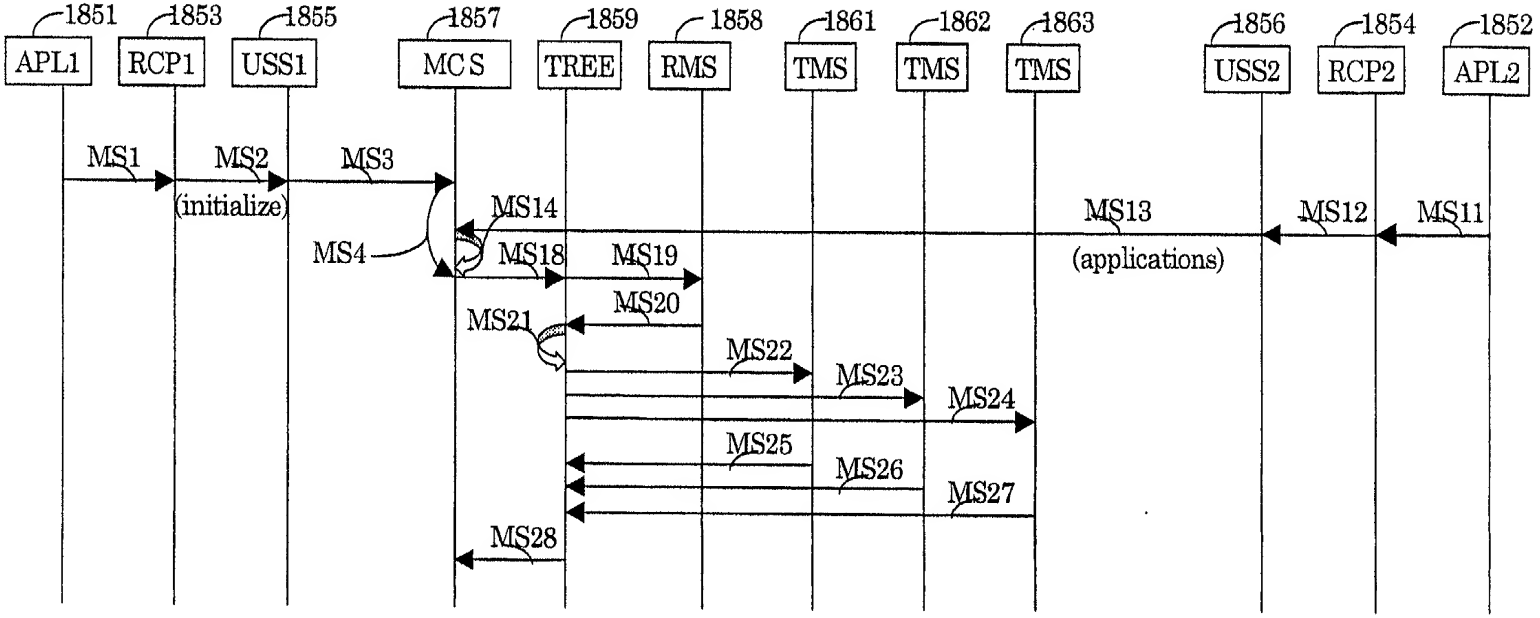

1851
APL1
1853
RCP1
1855
USS1
1857
MCS
1859
TREE
1858
RMS
1861
TMS
1862
TMS
1863
TMS
1856
USS2
1854
RCP2
1852
APL2
MS1
MS2
(initialize)
MS3
MS4
MS14
MS18
MS19
MS20
MS21
MS22
MS23
MS24
MS25
MS26
MS27
MS28
MS13
(applications)
MS12
MS11

FIG.318

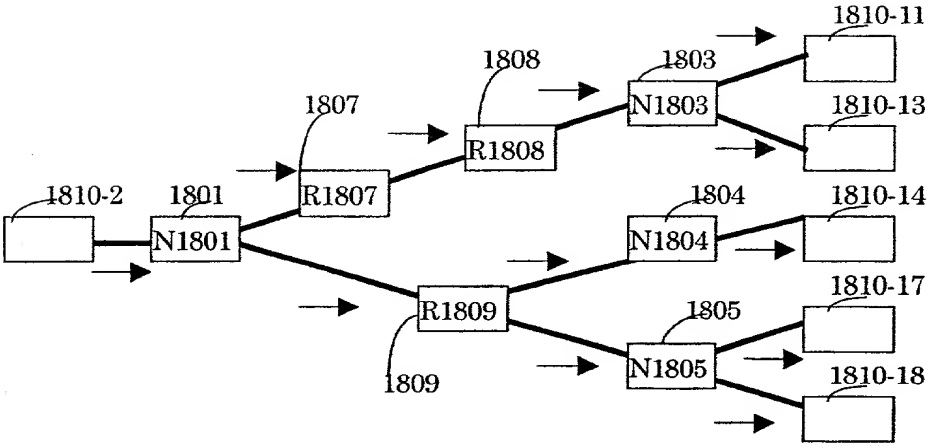


FIG.319

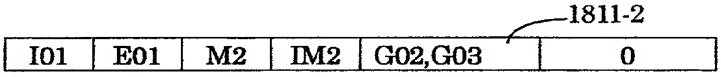


FIG.320

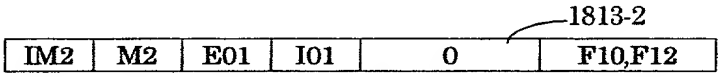


FIG.321

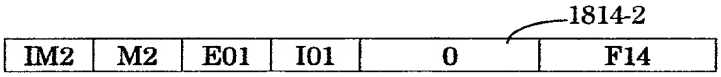


FIG.322

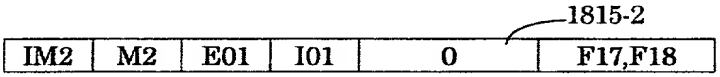


FIG.323

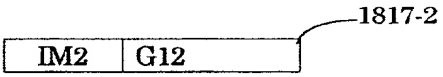


FIG.324

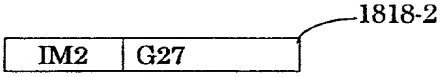


FIG.325

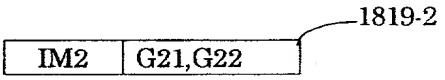
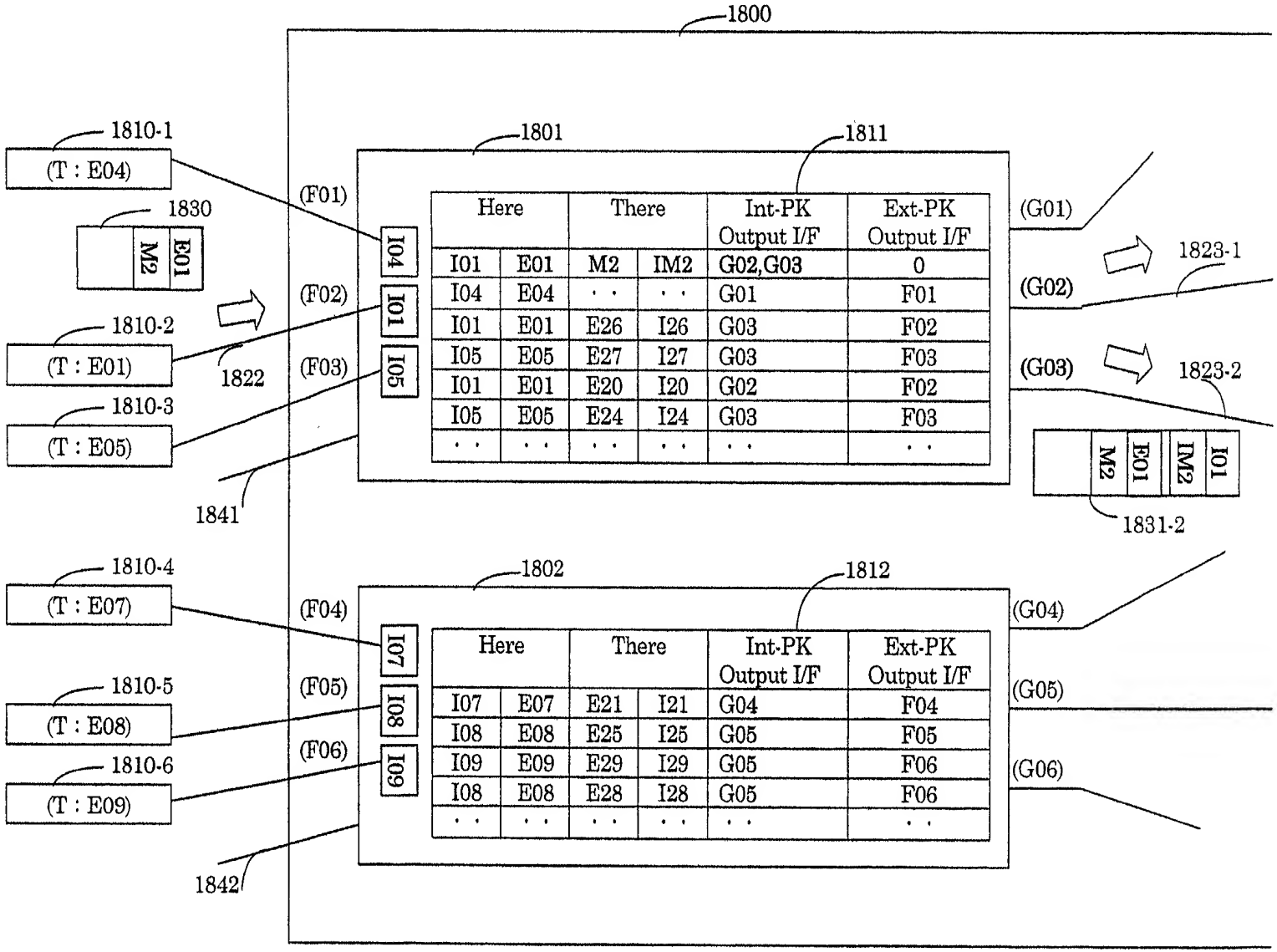
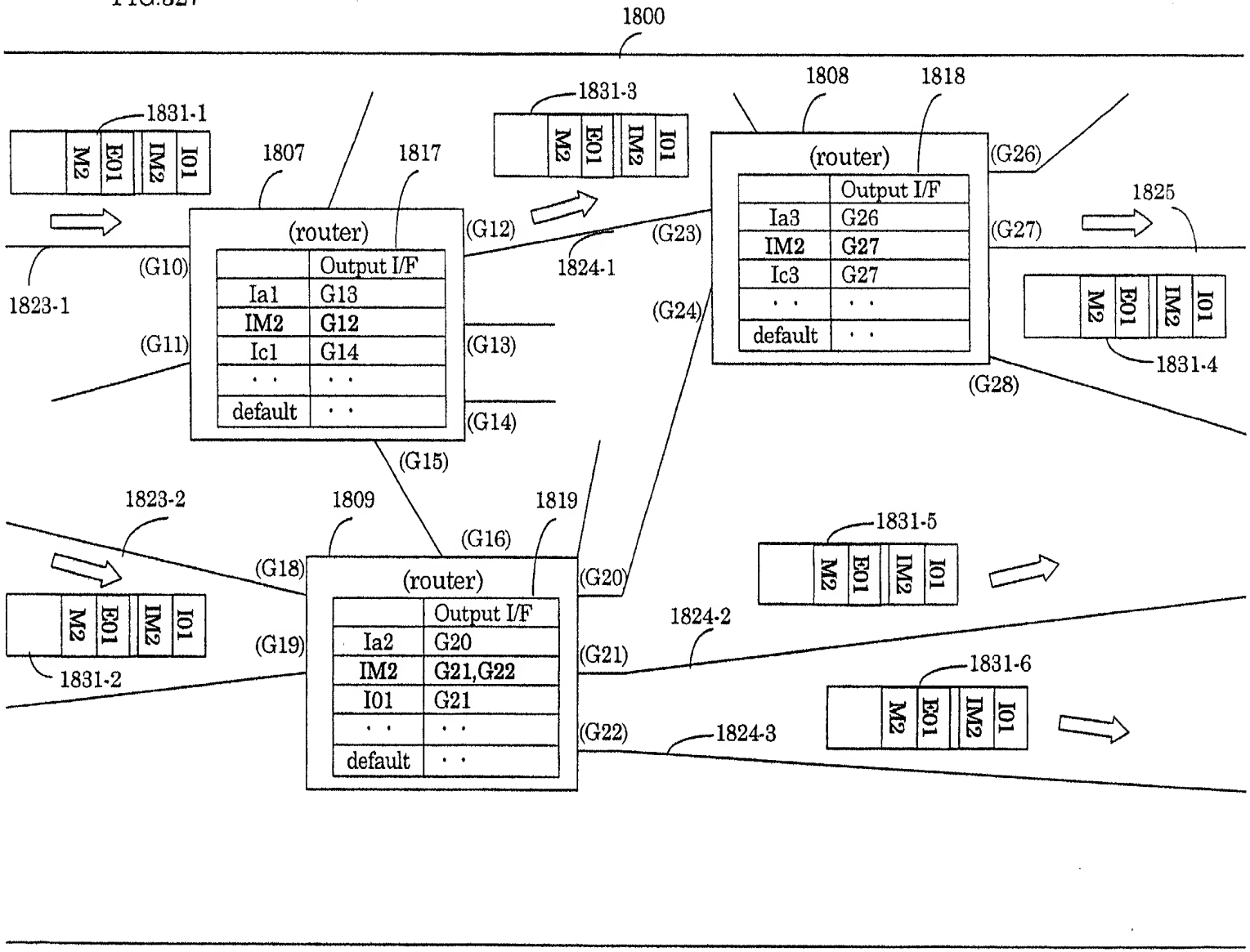


FIG.326


1800
1810-1
(T : E04)
1830
M2
E01
1810-2
(T : E01)
1822
1810-3
(T : E05)
1841
1801
1811
(F01)
(F02)
(F03)
I04
I01
I05
Here
There
Int-PK Output I/F
Ext-PK Output I/F
I01 E01 M2 IM2 G02,G03 0
I04 E04 · · · · G01 F01
I01 E01 E26 I26 G03 F02
I05 E05 E27 I27 G03 F03
I01 E01 E20 I20 G02 F02
I05 E05 E24 I24 G03 F03
(G01)
(G02)
(G03)
1823-1
1823-2
M2
E01
IM2
I01
1831-2
1810-4
(T : E07)
1810-5
(T : E08)
1810-6
(T : E09)
1842
1802
1812
(F04)
(F05)
(F06)
I07
I08
I09
I07 E07 E21 I21 G04 F04
I08 E08 E25 I25 G05 F05
I09 E09 E29 I29 G05 F06
I08 E08 E28 I28 G05 F06
(G04)
(G05)
(G06)

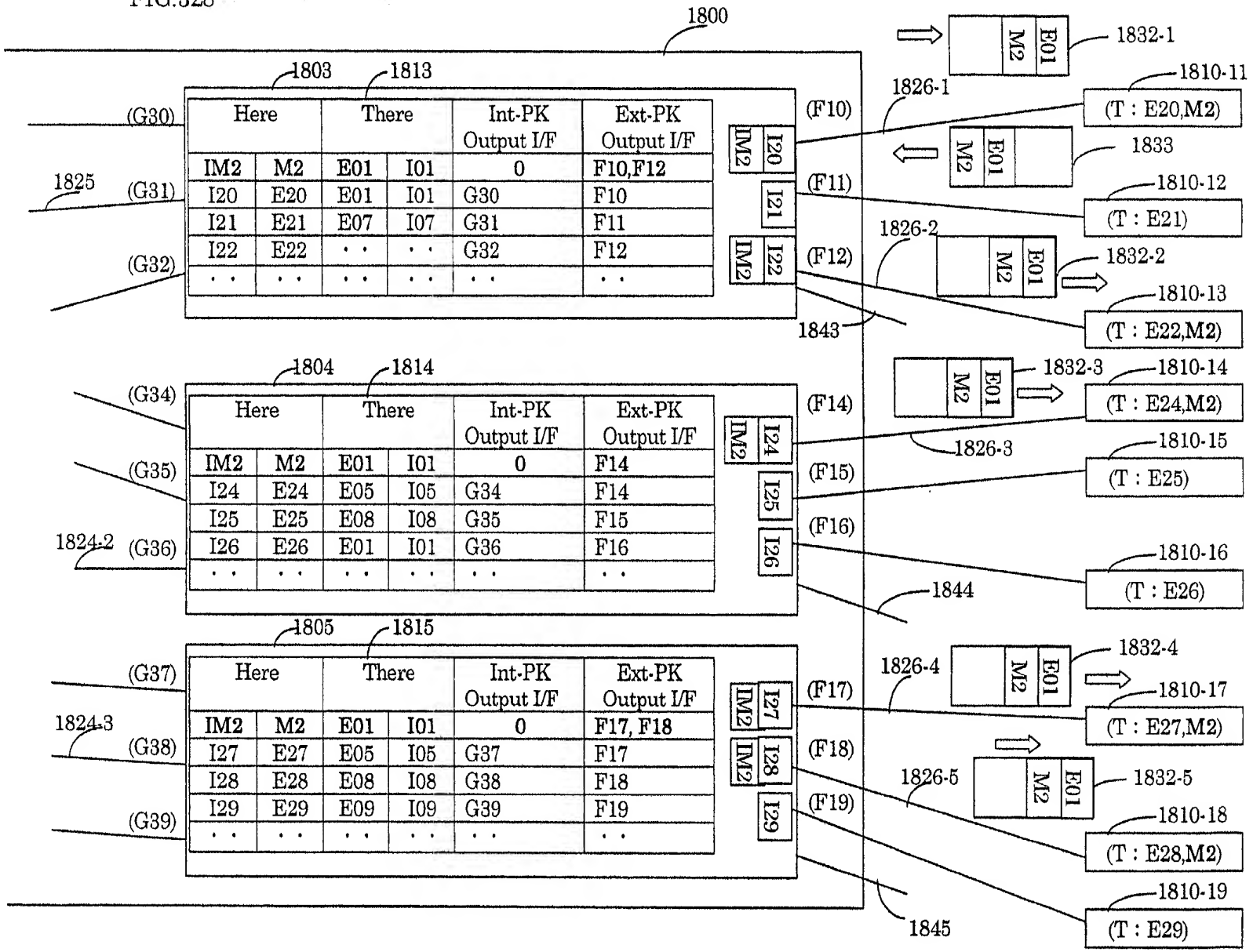
TOKEBO "2022080

FIG.327



TO2280 "292280

FIG.328



TW200402800

FIG.329

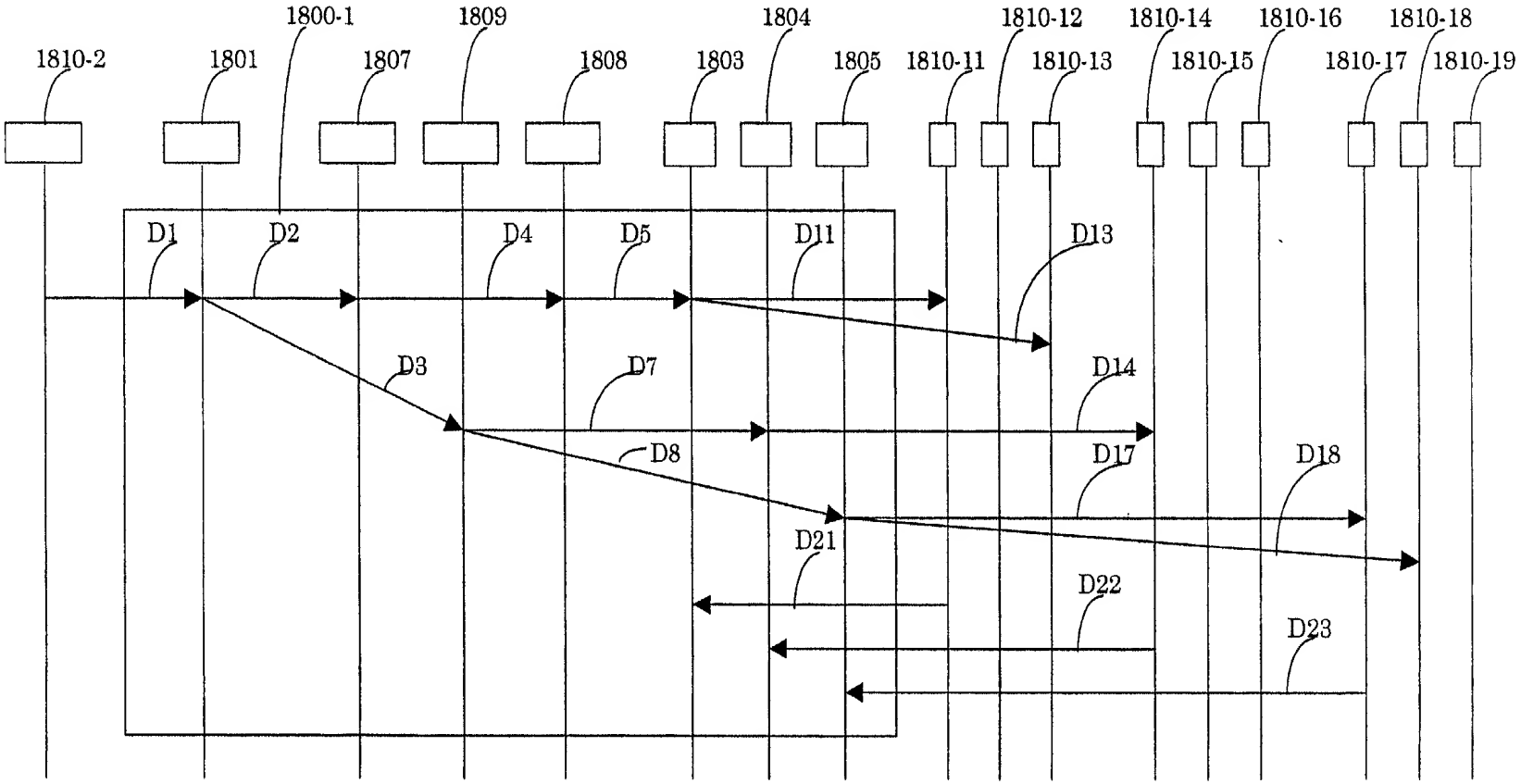


FIG.330

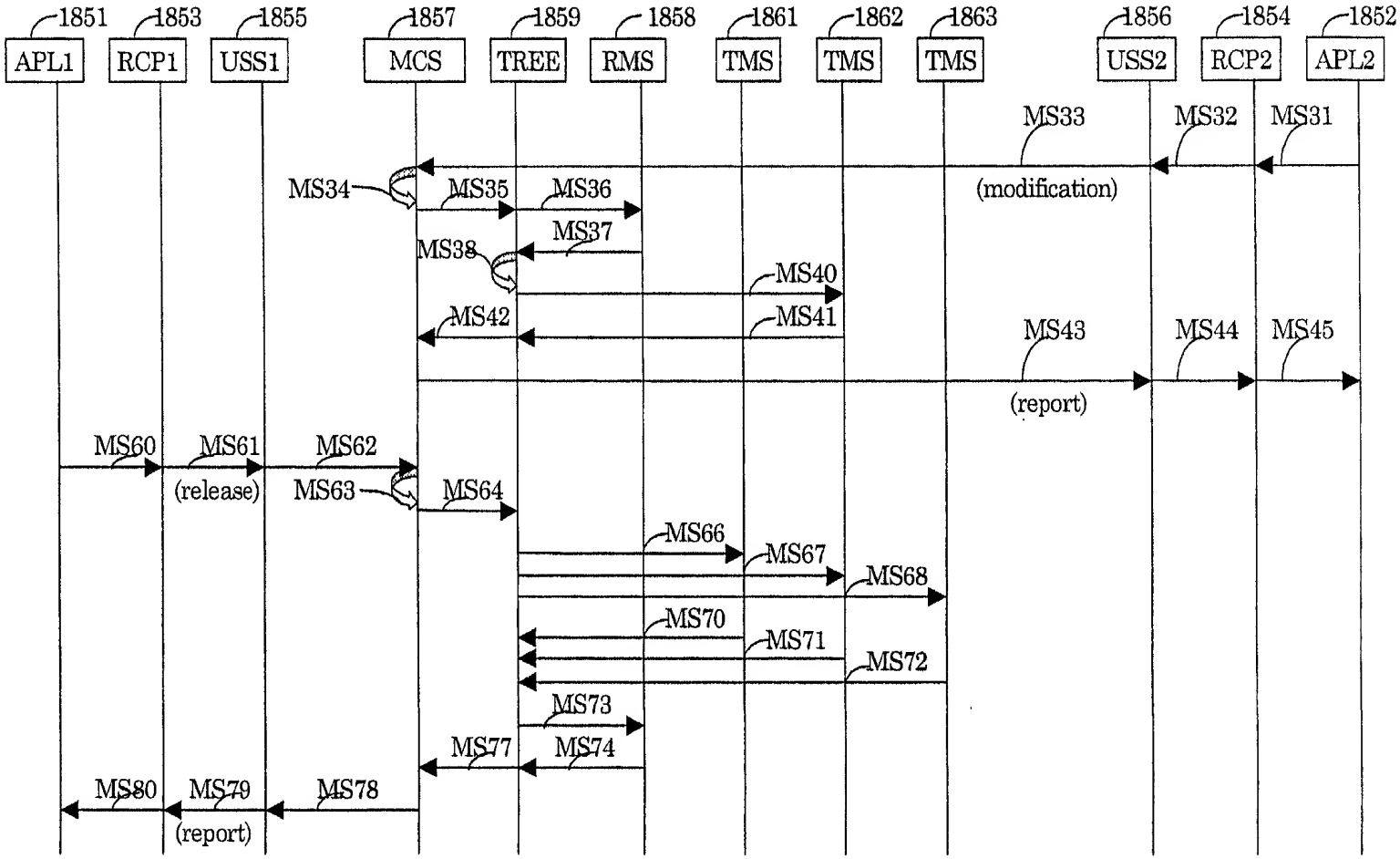

1851
APL1
1853
RCP1
1855
USS1
1857
MCS
1859
TREE
1858
RMS
1861
TMS
1862
TMS
1863
TMS
1856
USS2
1854
RCP2
1852
APL2
MS33
MS32
MS31
(modification)
MS34
MS35
MS36
MS37
MS38
MS40
MS42
MS41
MS43
MS44
MS45
(report)
MS60
MS61
(release)
MS62
MS63
MS64
MS66
MS67
MS68
MS70
MS71
MS72
MS73
MS77
MS74
MS80
MS79
(report)
MS78

FIG.331

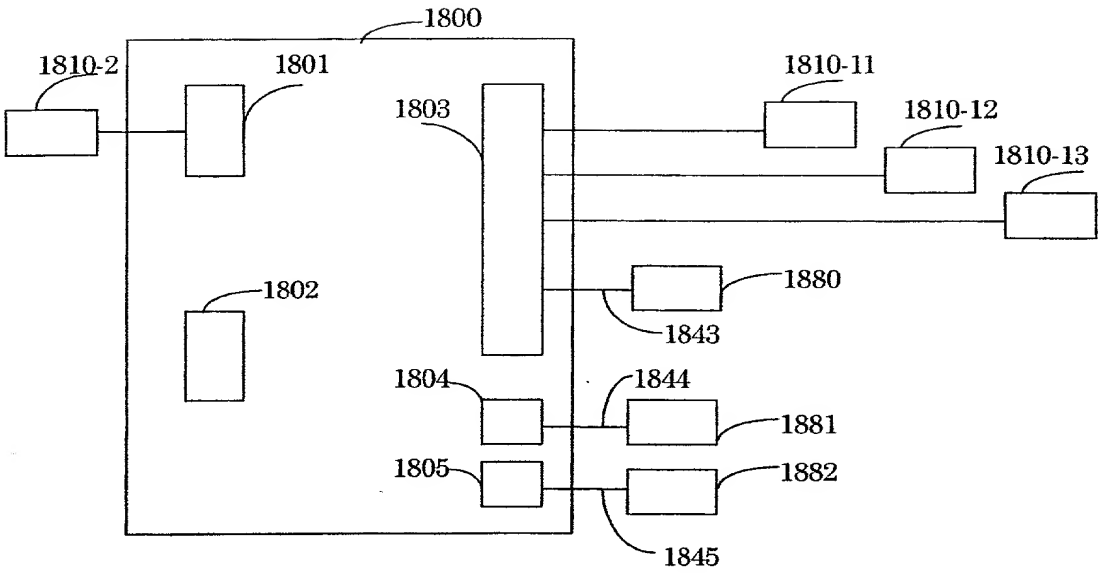


FIG.332

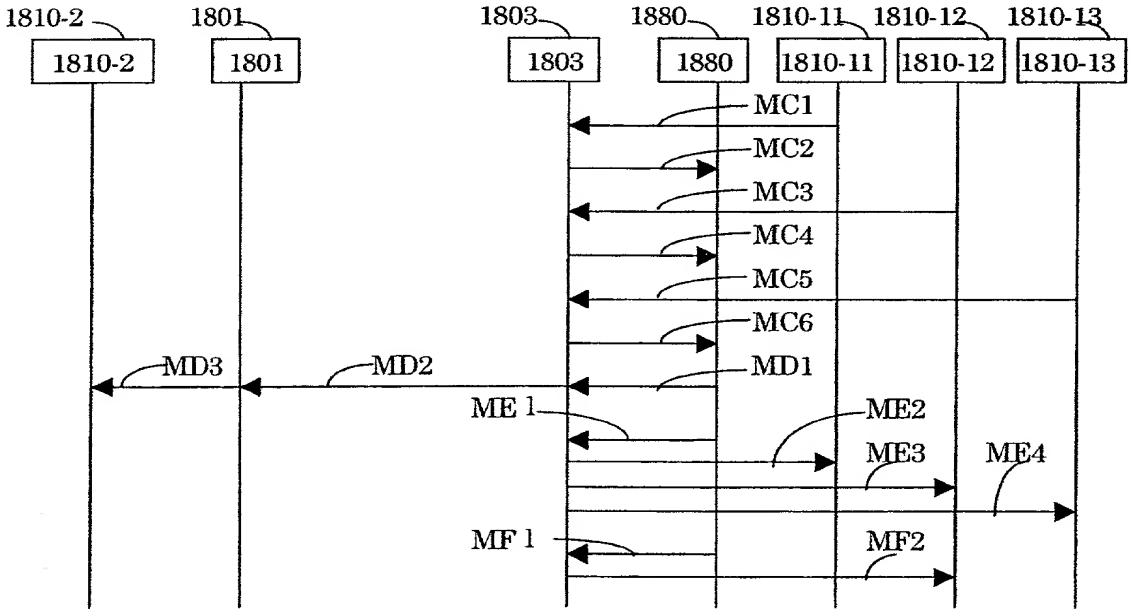


FIG.333

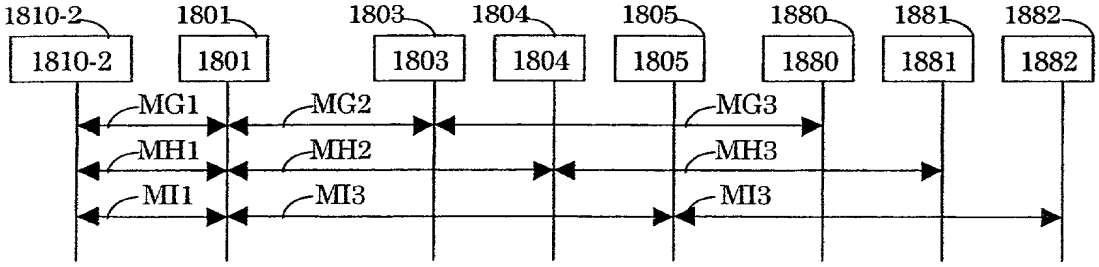


FIG.334

1811-5

Here	There		Int-PK Output I/F	Ext-PK Output I/F
I01	M2	IM2	G02,G03	0
I04	· ·	· ·	G01	F01
I01	E26	I26	G03	F02
I05	E27	I27	G03	F03
I01	E20	I20	G02	F02
I05	E24	I24	G03	F03
· ·	· ·	· ·	· ·	· ·

FIG.335

1811-6

Here			There			Int-PK Out I/F	Ext-PK Out I/F
I-adr	Mask	E-adr	Mask	E-adr	I-adr		
I01	M-h01	E01x	M-t2	M2x	IM2	G02,G03	0
I04	M-h04	E04x	· ·	· ·	· ·	G01	F01
I01	M-h01	E01x	M-t26	E26x	I26	G03	F02
I05	M-h05	E05x	M-t27	E27x	I28	G03	F03
I01	M-h01	E01x	M-t20	E20x	I20	· ·	· ·
I05	M-h05	E05x	M-t24	E24x	I24	· ·	· ·
· ·	· ·	· ·	· ·	· ·	· ·	· ·	· ·

FIG.336

1811-7

Here		There		Int-PK Output I/F	Ext-PK Output I/F
I01	E01	M2	IM2	MT-1	0
I04	E04	· ·	· ·	G01	F01
I01	E01	E26	I26	G03	F02
I05	E05	E27	I28	G03	F03
I01	E01	E20	I20	· ·	· ·
I05	E05	E24	I24	· ·	· ·
· ·	· ·	· ·	· ·	· ·	· ·

FIG.337

1811-8

MT-1	G02,G03
· ·	· ·

FIG.338

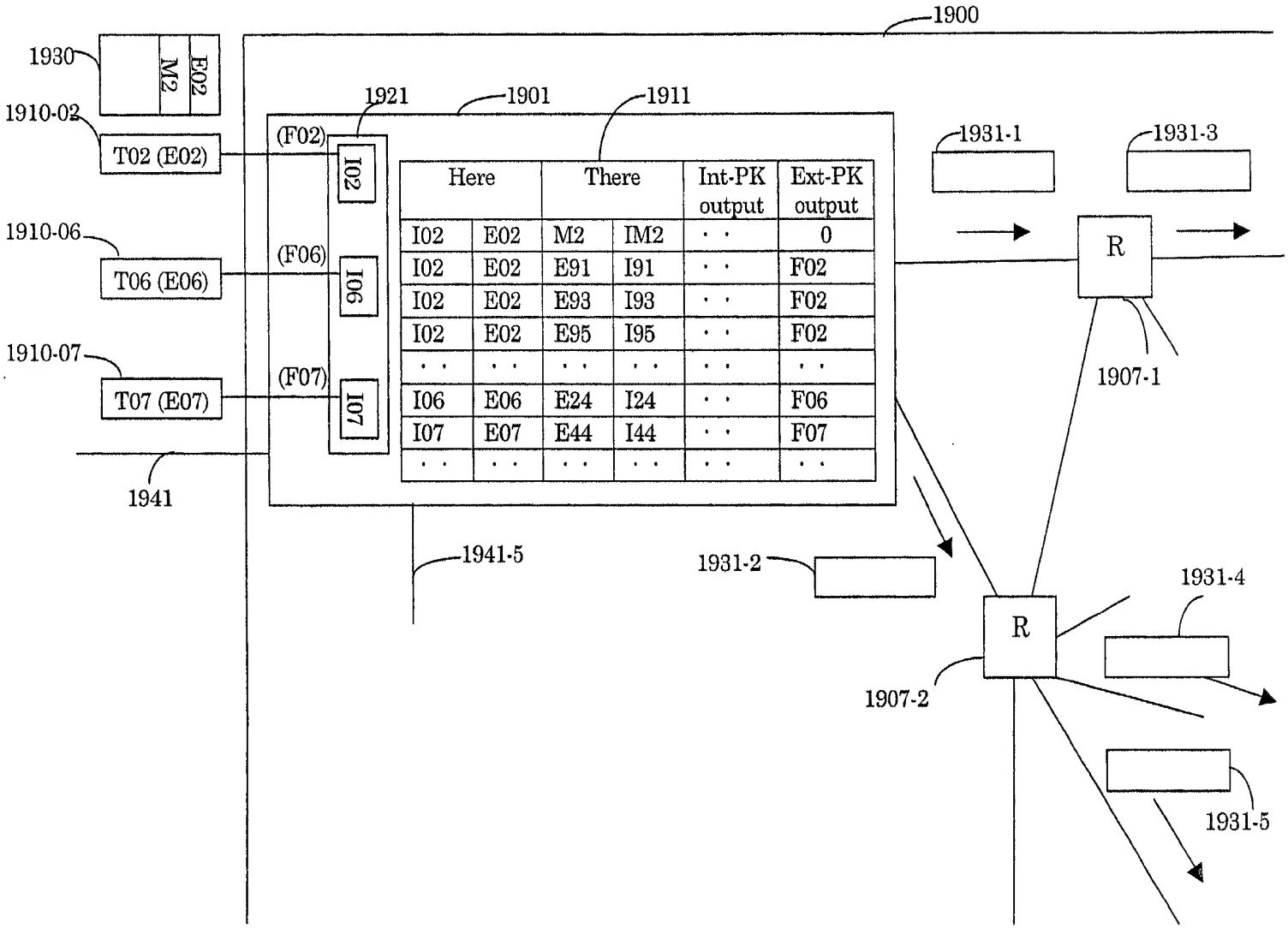
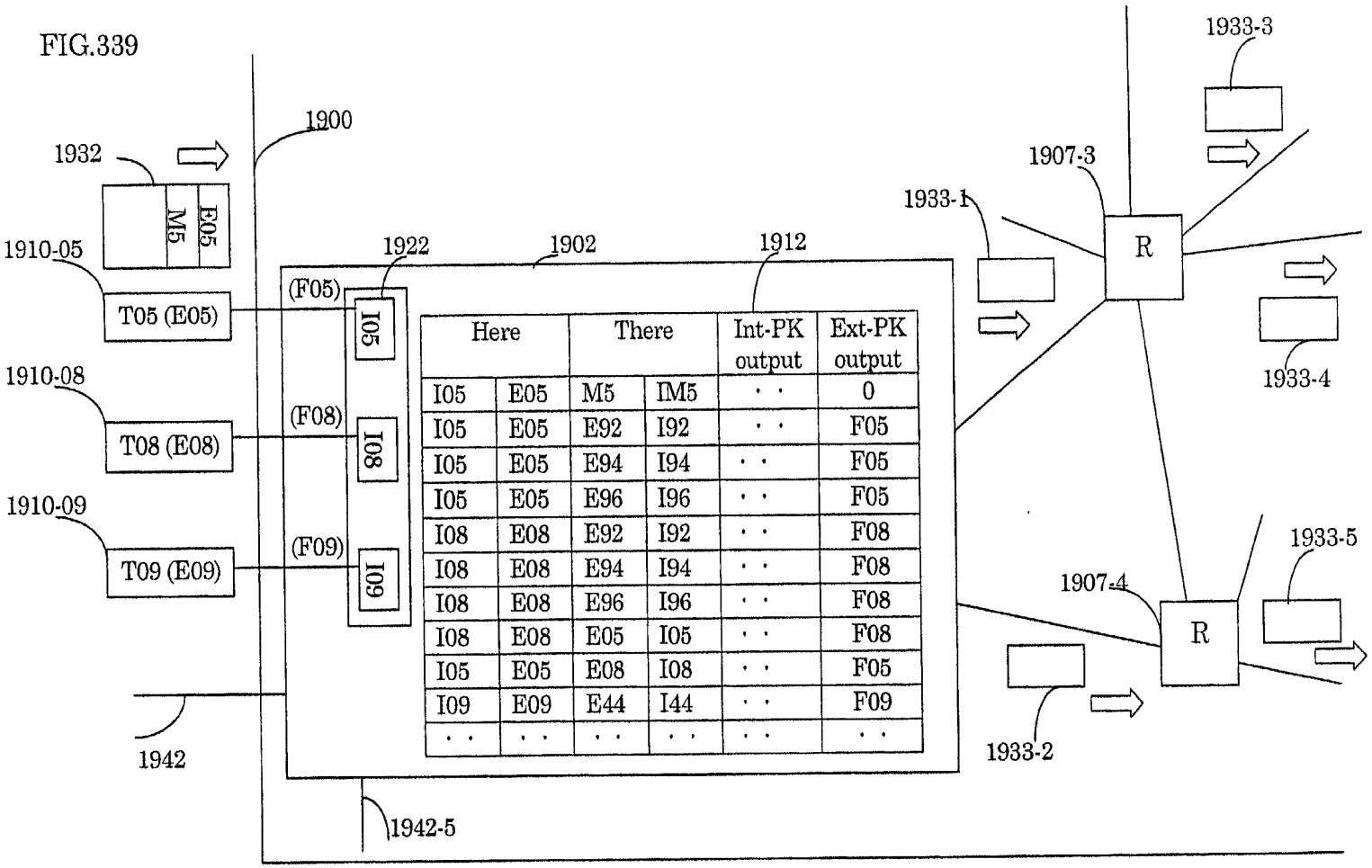
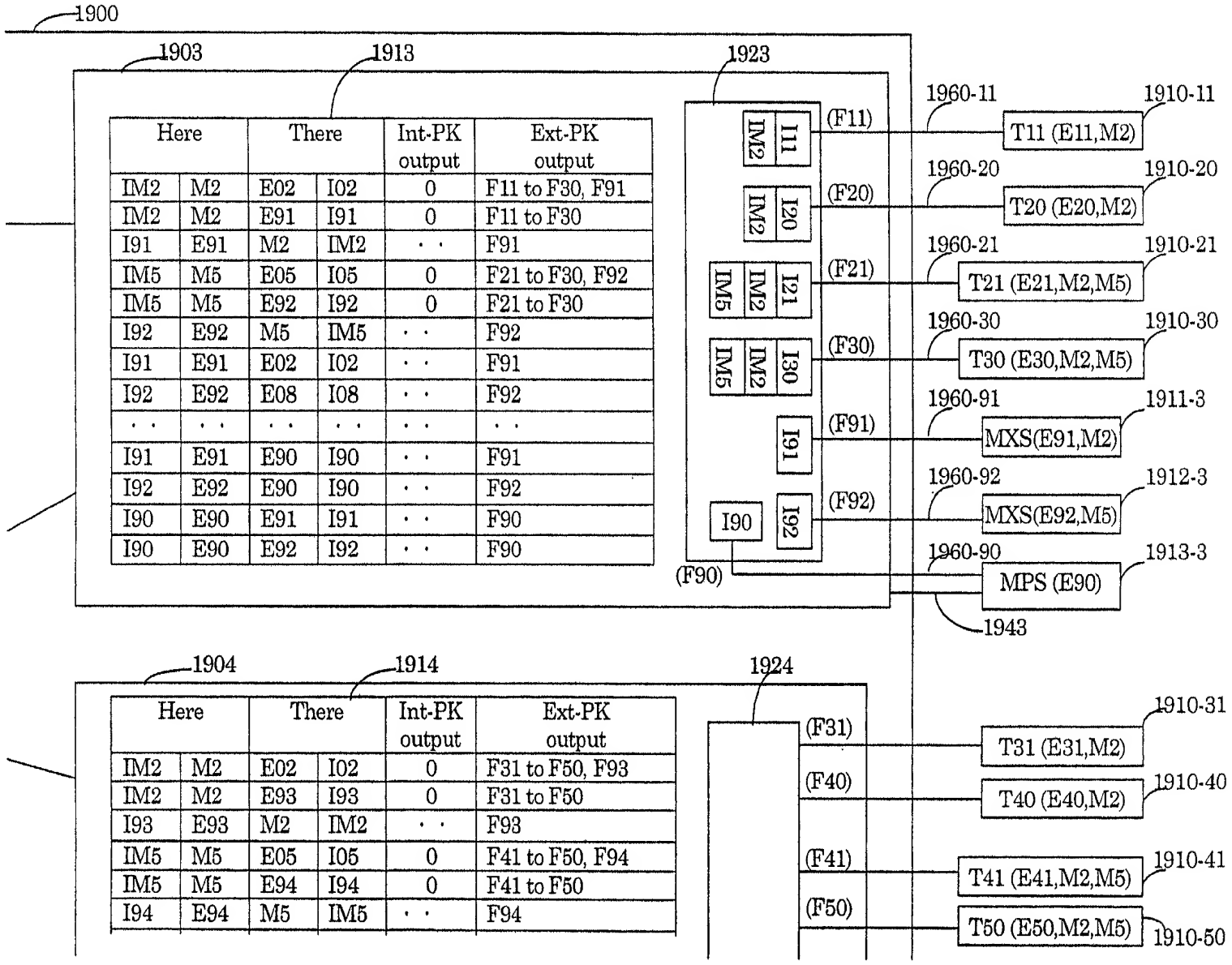

1900
1930
M2
E02
1910-02
T02 (E02)
1921
1901
1911
(F02)
I02
1931-1
1931-3
Here
There
Int-PK output
Ext-PK output
I02 E02 M2 IM2 · · 0
I02 E02 E91 I91 · · F02
I02 E02 E93 I93 · · F02
I02 E02 E95 I95 · · F02
· · · · · · · · · · · ·
I06 E06 E24 I24 · · F06
I07 E07 E44 I44 · · F07
· · · · · · · · · · · ·
1910-06
T06 (E06)
(F06)
I06
R
1907-1
1910-07
T07 (E07)
(F07)
I07
1941
1941-5
1931-2
1931-4
R
1907-2
1931-5

FIG.339



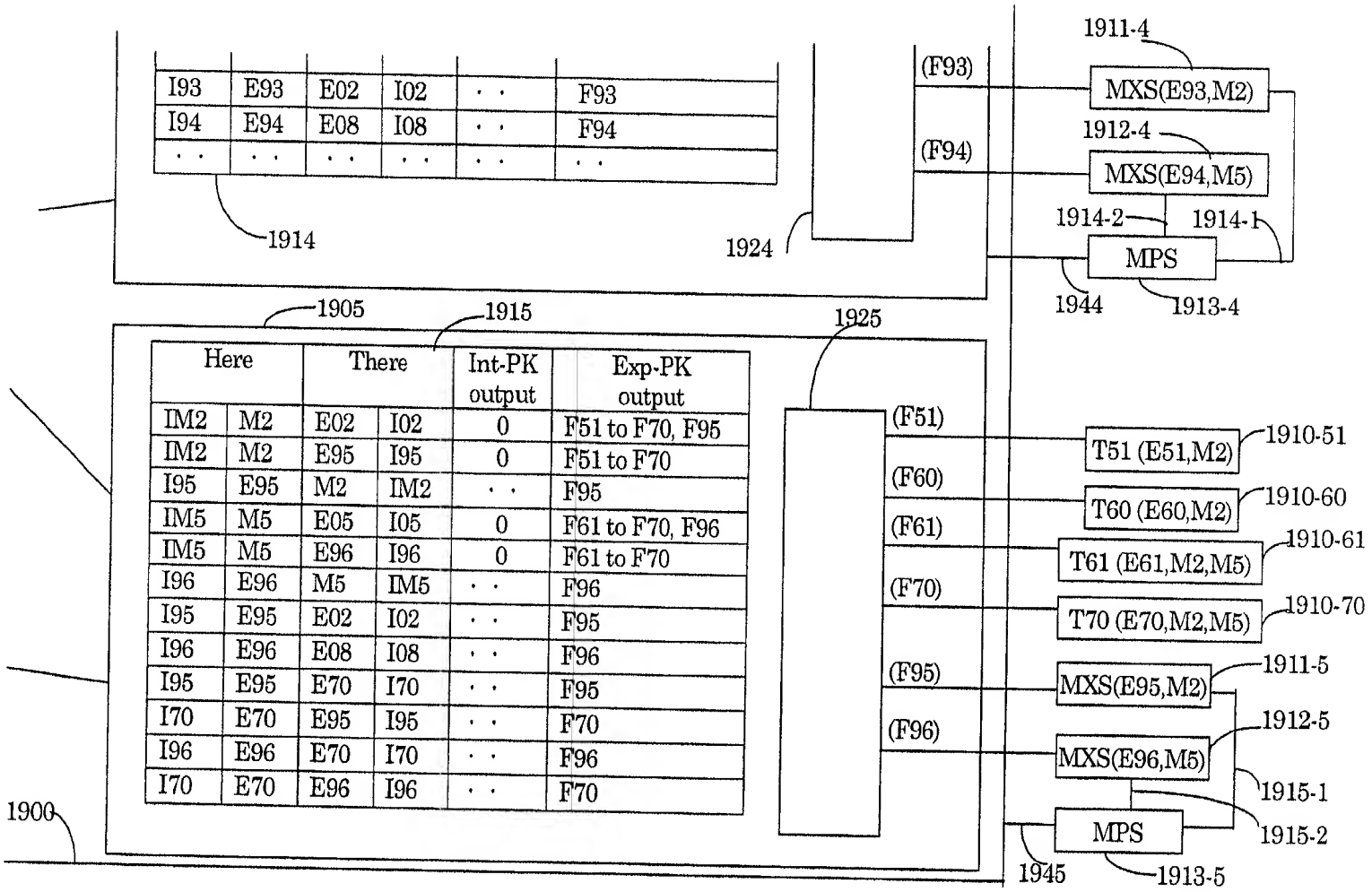
Here		There		Int-PK output	Ext-PK output
I05	E05	M5	IM5	· ·	0
I05	E05	E92	I92	· ·	F05
I05	E05	E94	I94	· ·	F05
I05	E05	E96	I96	· ·	F05
I08	E08	E92	I92	· ·	F08
I08	E08	E94	I94	· ·	F08
I08	E08	E96	I96	· ·	F08
I08	E08	E05	I05	· ·	F08
I05	E05	E08	I08	· ·	F05
I09	E09	E44	I44	· ·	F09
· ·	· ·	· ·	· ·	· ·	· ·

FIG.340


1900
1903
1913
1923
1904
1914
1924
Here
There
Int-PK output
Ext-PK output
IM2 M2 E02 I02 0 F11 to F30, F91
IM2 M2 E91 I91 0 F11 to F30
I91 E91 M2 IM2 · · F91
IM5 M5 E05 I05 0 F21 to F30, F92
IM5 M5 E92 I92 0 F21 to F30
I92 E92 M5 IM5 · · F92
I91 E91 E02 I02 · · F91
I92 E92 E08 I08 · · F92
I91 E91 E90 I90 · · F91
I92 E92 E90 I90 · · F92
I90 E90 E91 I91 · · F90
I90 E90 E92 I92 · · F90
IM2 I11 (F11)
IM2 I20 (F20)
IM5 IM2 I21 (F21)
IM5 IM2 I30 (F30)
I91 (F91)
I90 I92 (F92)
(F90)
1960-11
1910-11
T11 (E11,M2)
1960-20
1910-20
T20 (E20,M2)
1960-21
1910-21
T21 (E21,M2,M5)
1960-30
1910-30
T30 (E30,M2,M5)
1960-91
1911-3
MXS(E91,M2)
1960-92
1912-3
MXS(E92,M5)
1960-90
1913-3
MPS (E90)
1943
IM2 M2 E02 I02 0 F31 to F50, F93
IM2 M2 E93 I93 0 F31 to F50
I93 E93 M2 IM2 · · F93
IM5 M5 E05 I05 0 F41 to F50, F94
IM5 M5 E94 I94 0 F41 to F50
I94 E94 M5 IM5 · · F94
(F31)
(F40)
(F41)
(F50)
1910-31
T31 (E31,M2)
1910-40
T40 (E40,M2)
1910-41
T41 (E41,M2,M5)
T50 (E50,M2,M5)
1910-50

TOSHIBA 2982860

FIG.341



I93	E93	E02	I02	· ·	F93
I94	E94	E08	I08	· ·	F94
· ·	· ·	· ·	· ·	· ·	· ·

Here		There		Int-PK output	Exp-PK output
IM2	M2	E02	I02	0	F51 to F70, F95
IM2	M2	E95	I95	0	F51 to F70
I95	E95	M2	IM2	· ·	F95
IM5	M5	E05	I05	0	F61 to F70, F96
IM5	M5	E96	I96	0	F61 to F70
I96	E96	M5	IM5	· ·	F96
I95	E95	E02	I02	· ·	F95
I96	E96	E08	I08	· ·	F96
I95	E95	E70	I70	· ·	F95
I70	E70	E95	I95	· ·	F70
I96	E96	E70	I70	· ·	F96
I70	E70	E96	I96	· ·	F70

FIG.342

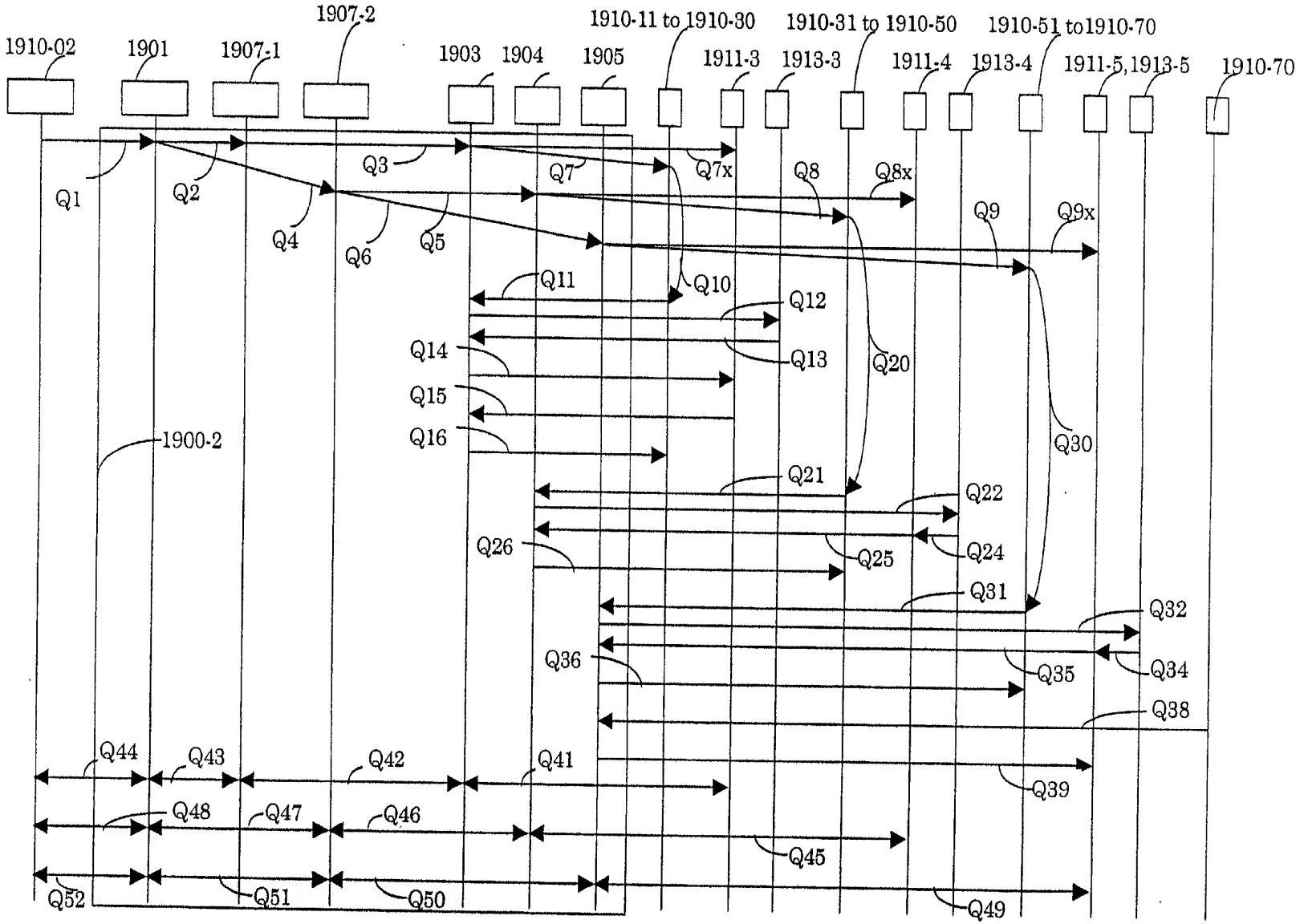

1910-02
1901
1907-1
1907-2
1903
1904
1905
1910-11 to 1910-30
1911-3
1913-3
1910-31 to 1910-50
1911-4
1913-4
1910-51 to1910-70
1911-5,1913-5
1910-70
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q7x
Q8
Q8x
Q9
Q9x
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q20
Q21
Q22
Q24
Q25
Q26
Q30
Q31
Q32
Q34
Q35
Q36
Q38
Q39
Q41
Q42
Q43
Q44
Q45
Q46
Q47
Q48
Q49
Q50
Q51
Q52
1900-2

FIG.343

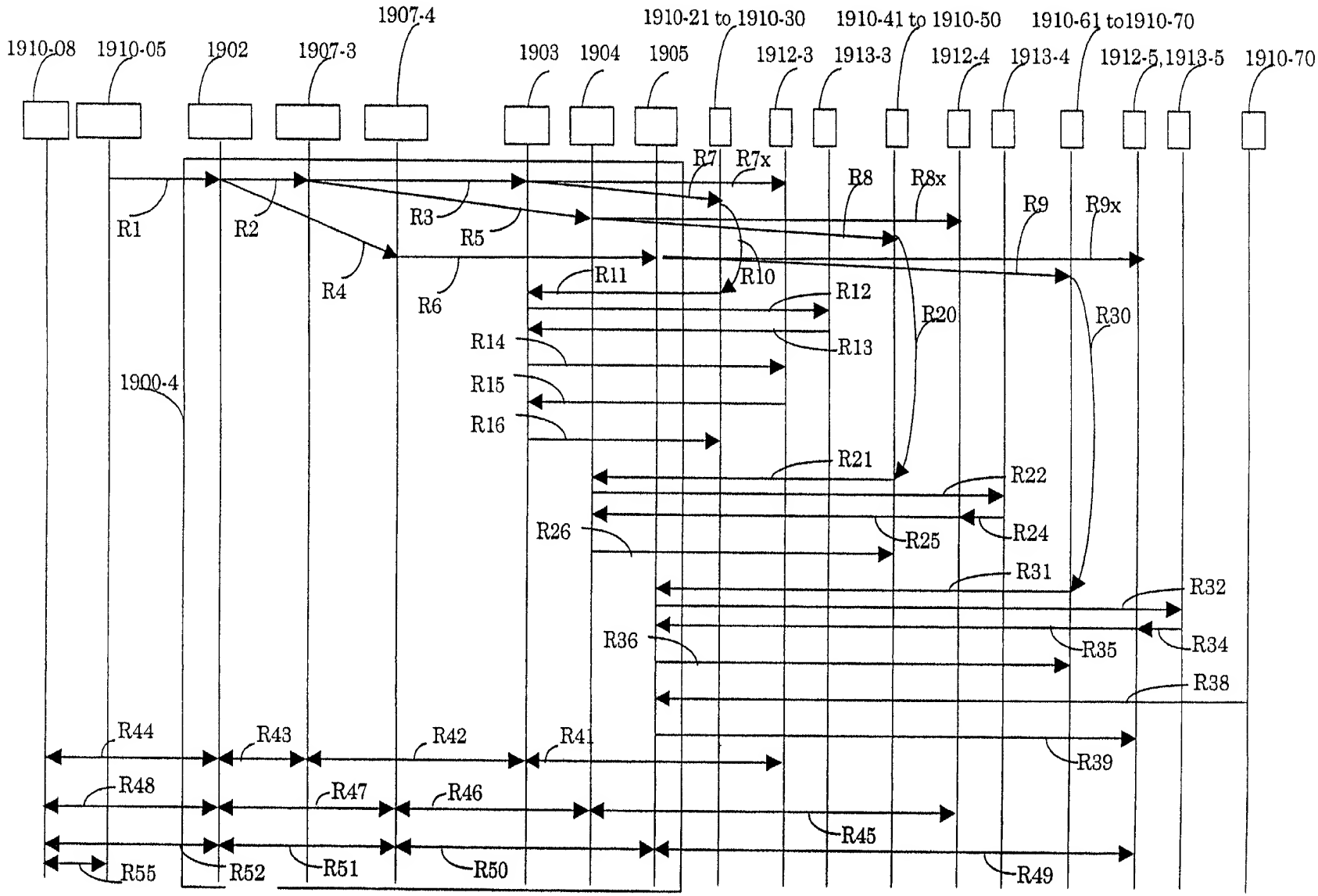

1910-08
1910-05
1902
1907-3
1907-4
1903
1904
1905
1910-21 to 1910-30
1912-3
1913-3
1910-41 to 1910-50
1912-4
1913-4
1910-61 to1910-70
1912-5,1913-5
1910-70
1900-4
R1
R2
R3
R4
R5
R6
R7
R7x
R8
R8x
R9
R9x
R10
R11
R12
R13
R14
R15
R16
R20
R21
R22
R24
R25
R26
R30
R31
R32
R34
R35
R36
R38
R39
R41
R42
R43
R44
R45
R46
R47
R48
R49
R50
R51
R52
R55

FIG.344

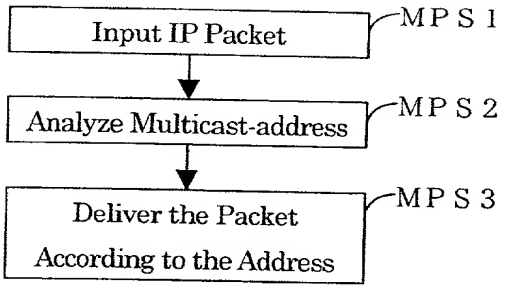


FIG.345

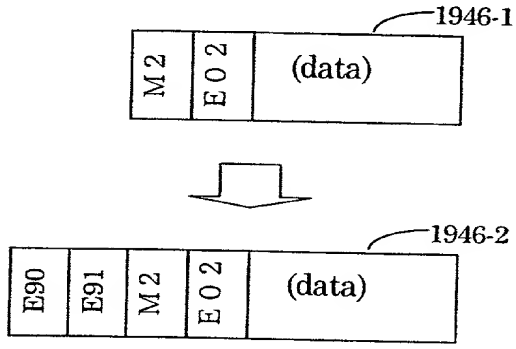


FIG.346

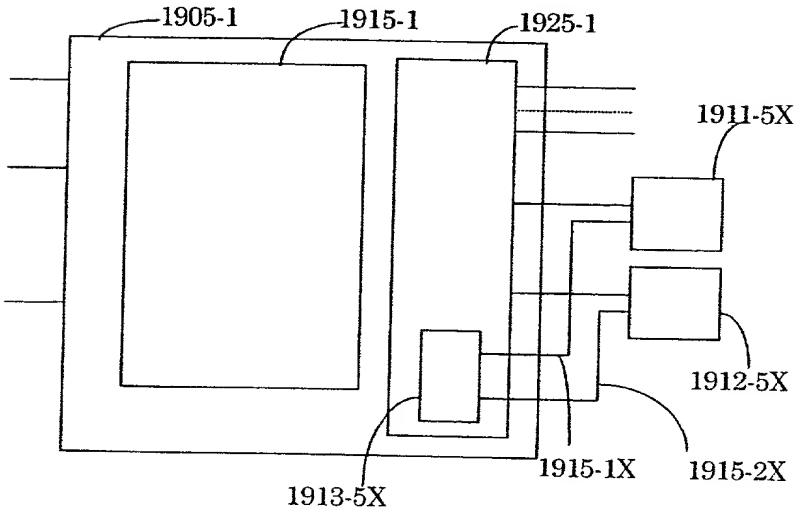


FIG.347

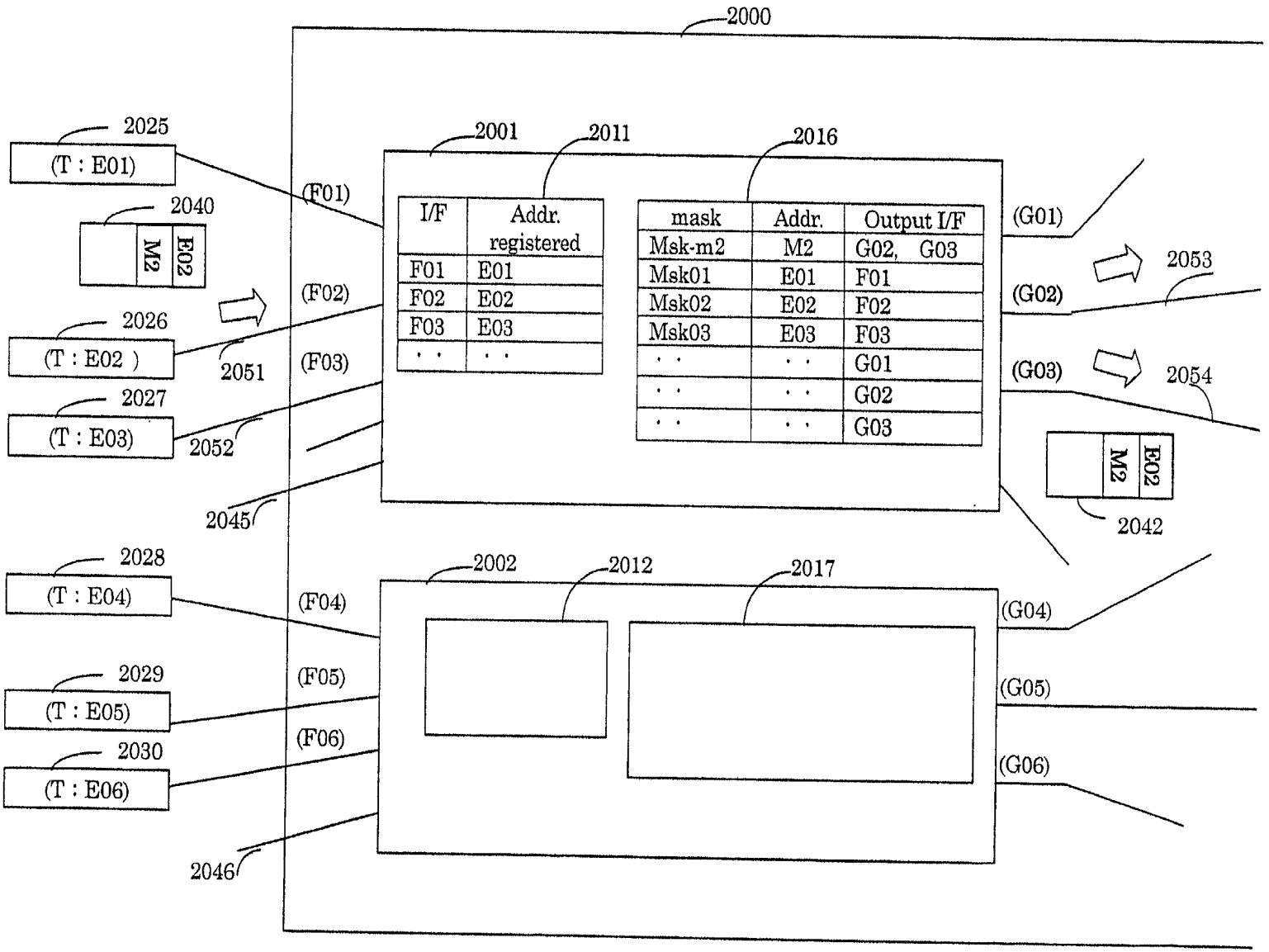

2000
2025
(T : E01)
2040
M2
E02
2026
(T : E02)
2027
(T : E03)
(F01)
(F02)
(F03)
2051
2052
2045
2001
2011
2016
I/F
Addr. registered
F01 E01
F02 E02
F03 E03
mask
Addr.
Output I/F
Msk-m2 M2 G02, G03
Msk01 E01 F01
Msk02 E02 F02
Msk03 E03 F03
G01
G02
G03
(G01)
(G02)
(G03)
2053
2054
2042
2028
(T : E04)
2029
(T : E05)
2030
(T : E06)
(F04)
(F05)
(F06)
2046
2002
2012
2017
(G04)
(G05)
(G06)

FIG.348

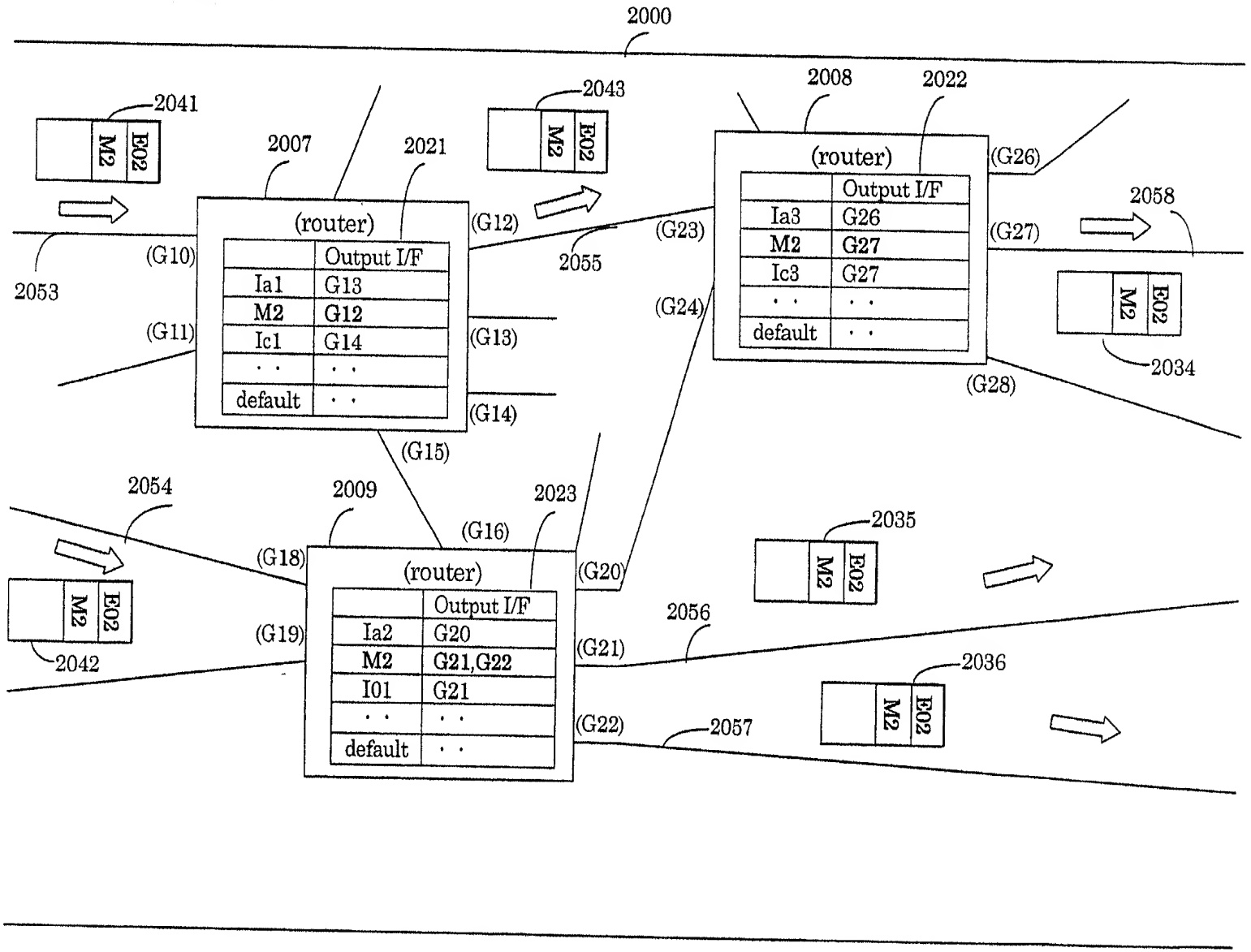

2000
2041
M2
E02
2043
M2
E02
2007
2021
2008
2022
(router)
Output I/F
Ia1 G13
M2 G12
Ic1 G14
default
(router)
Output I/F
Ia3 G26
M2 G27
Ic3 G27
default
(G10)
(G11)
(G12)
(G13)
(G14)
(G15)
(G23)
(G24)
(G26)
(G27)
(G28)
2053
2055
2058
2034
2054
2009
2023
(G16)
(G18)
(G19)
(G20)
(G21)
(G22)
2035
2056
2036
2057
2042
(router)
Output I/F
Ia2 G20
M2 G21,G22
I01 G21
default

FIG.349

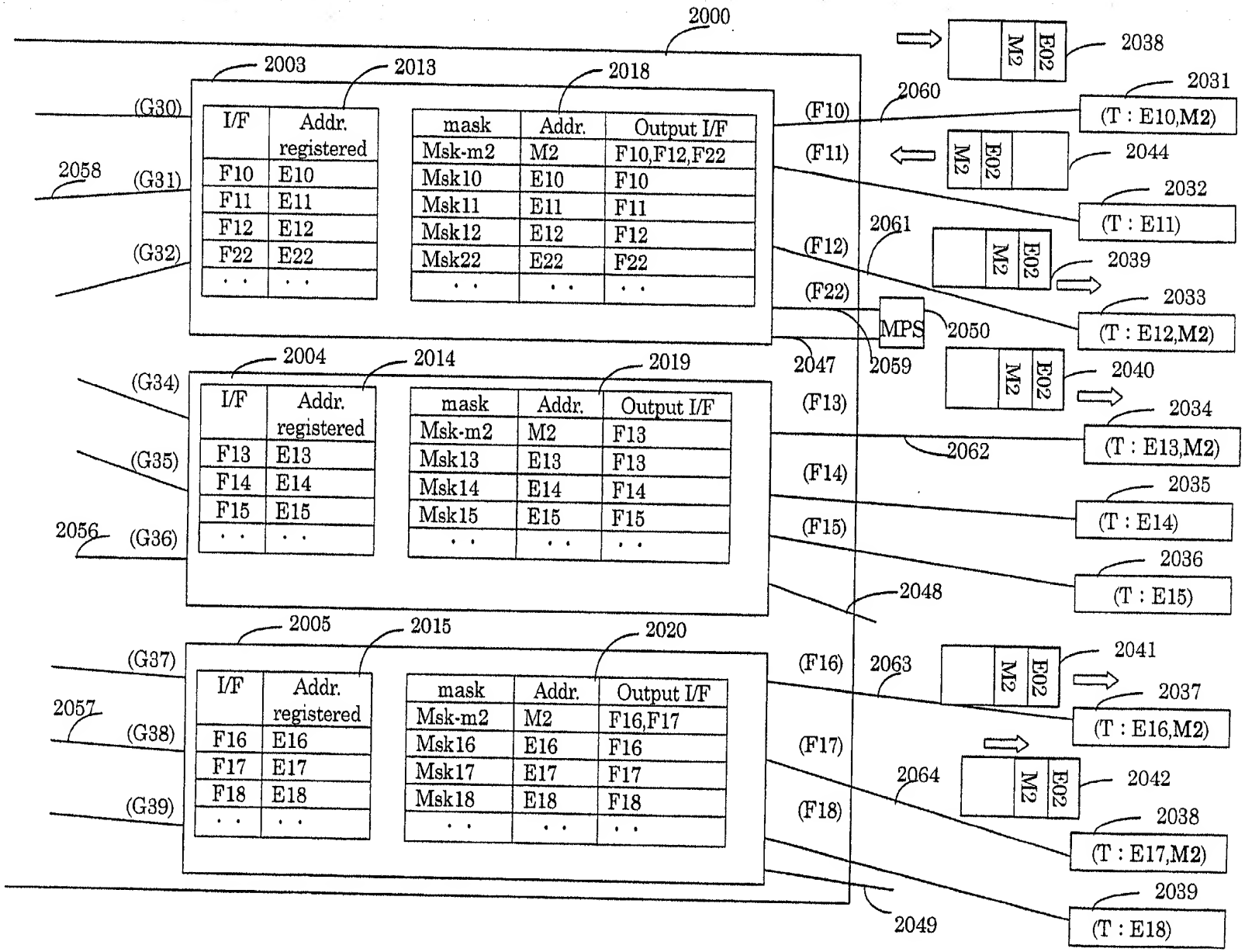

2000
2003
2013
2018
(G30)
(G31)
(G32)
2058
I/F
Addr. registered
F10 E10
F11 E11
F12 E12
F22 E22
mask
Addr.
Output I/F
Msk-m2 M2 F10,F12,F22
Msk10 E10 F10
Msk11 E11 F11
Msk12 E12 F12
Msk22 E22 F22
2004
2014
2019
(G34)
(G35)
(G36)
2056
F13 E13
F14 E14
F15 E15
Msk-m2 M2 F13
Msk13 E13 F13
Msk14 E14 F14
Msk15 E15 F15
2005
2015
2020
(G37)
(G38)
(G39)
2057
F16 E16
F17 E17
F18 E18
Msk-m2 M2 F16,F17
Msk16 E16 F16
Msk17 E17 F17
Msk18 E18 F18
(F10)
(F11)
(F12)
(F22)
(F13)
(F14)
(F15)
(F16)
(F17)
(F18)
2060
2061
2059
2062
2063
2064
2047
2048
2049
MPS
2050
M2 E02
2038
2031
(T : E10,M2)
2044
2032
(T : E11)
2039
2033
(T : E12,M2)
2040
2034
(T : E13,M2)
2035
(T : E14)
2036
(T : E15)
2041
2037
(T : E16,M2)
2042
2038
(T : E17,M2)
2039
(T : E18)

FIG.350

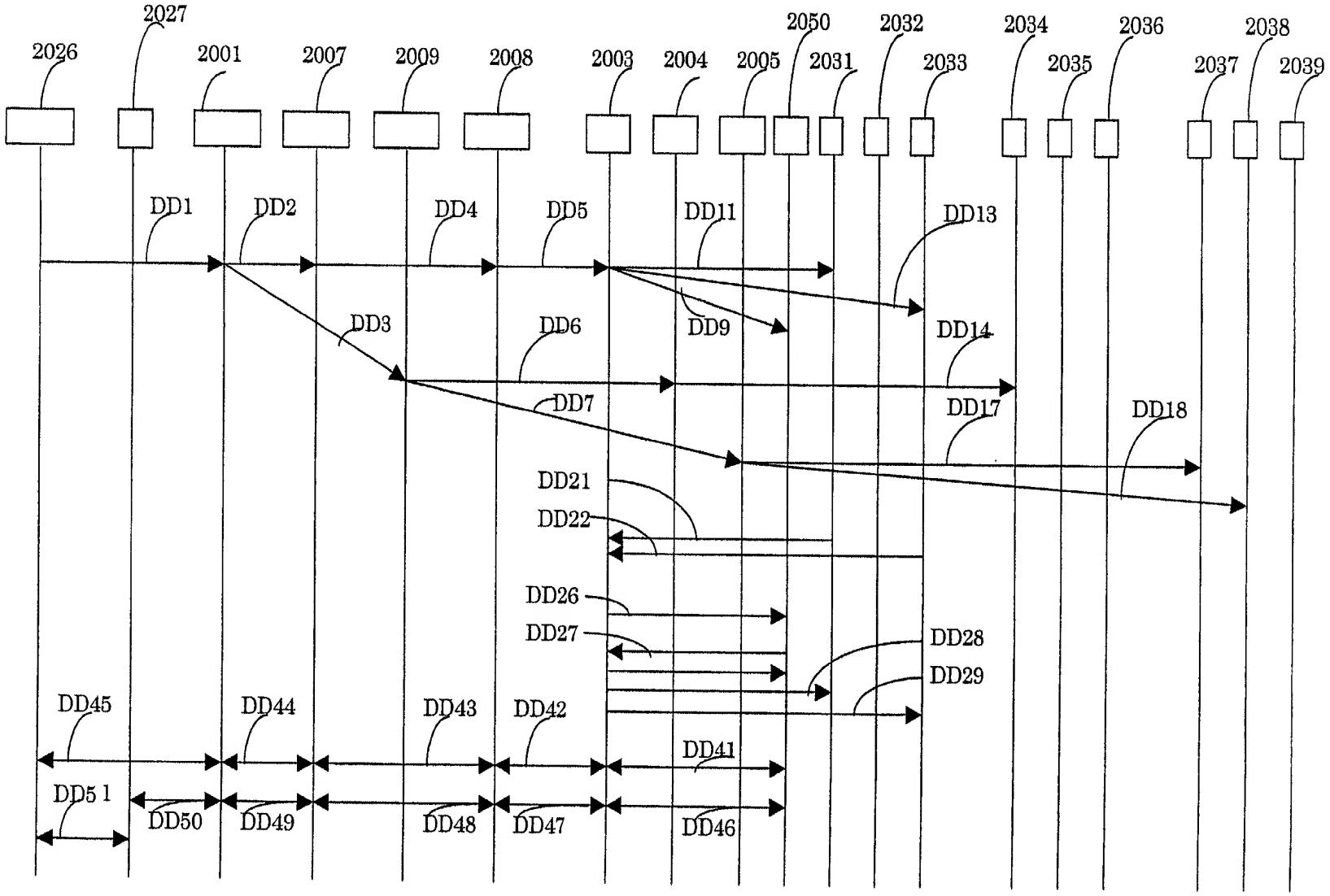

2026
2027
2001
2007
2009
2008
2003
2004
2005
2050
2031
2032
2033
2034
2035
2036
2037
2038
2039
DD1
DD2
DD4
DD5
DD11
DD13
DD3
DD6
DD9
DD14
DD7
DD17
DD18
DD21
DD22
DD26
DD27
DD28
DD29
DD45
DD44
DD43
DD42
DD41
DD5 1
DD50
DD49
DD48
DD47
DD46

FIG.351

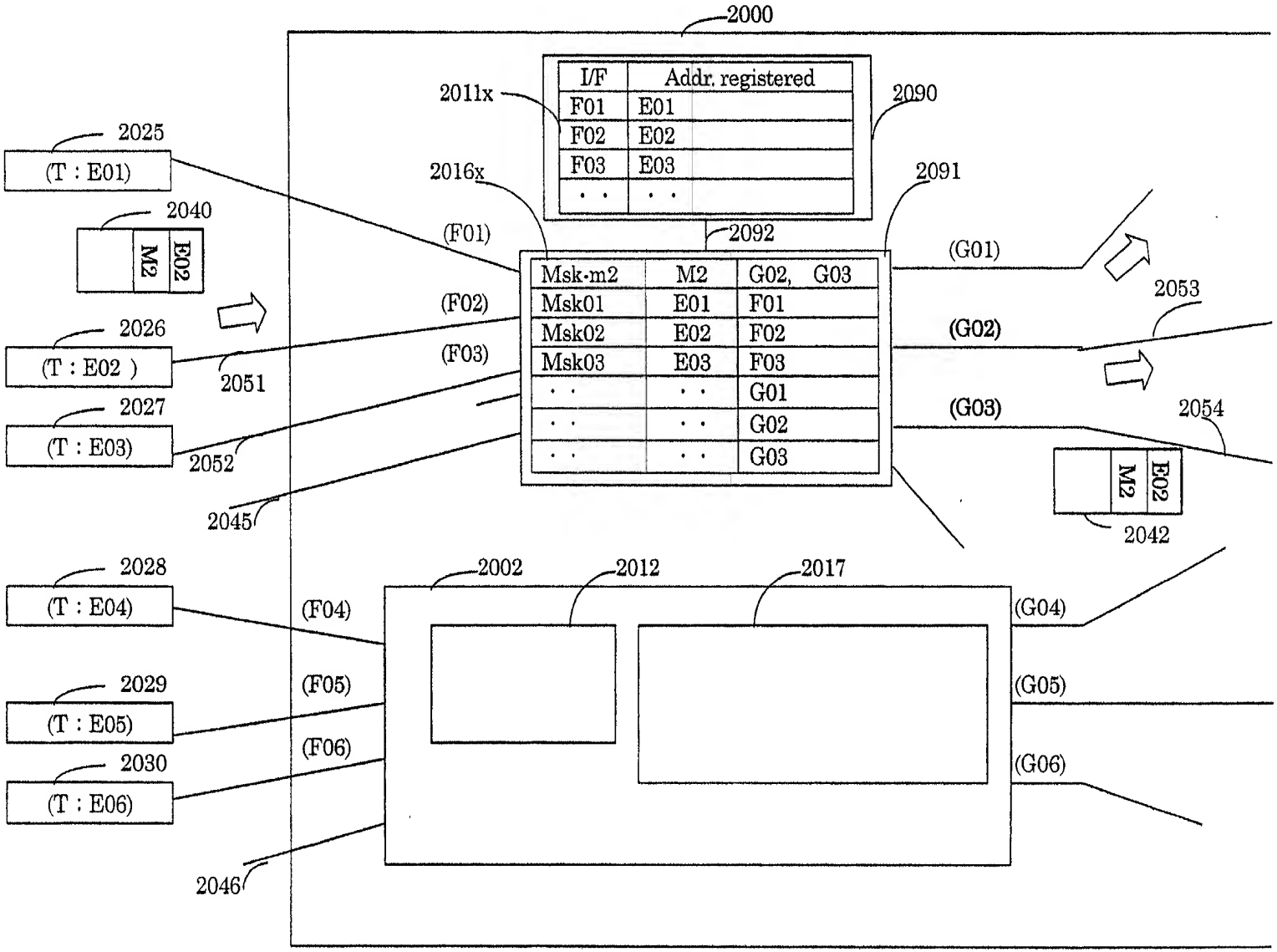

2000
2011x
2090
I/F
Addr. registered
F01
E01
F02
E02
F03
E03
2025
(T : E01)
2040
M2
E02
2016x
2091
(F01)
2092
(G01)
2053
(F02)
(G02)
2026
(T : E02)
2051
(F03)
Msk·m2
M2
G02, G03
Msk01
E01
F01
Msk02
E02
F02
Msk03
E03
F03
G01
G02
G03
2027
(T : E03)
2052
(G03)
2054
2045
2042
2028
(T : E04)
2002
2012
2017
(F04)
(G04)
2029
(T : E05)
(F05)
(G05)
(F06)
2030
(T : E06)
(G06)
2046

FIG.352

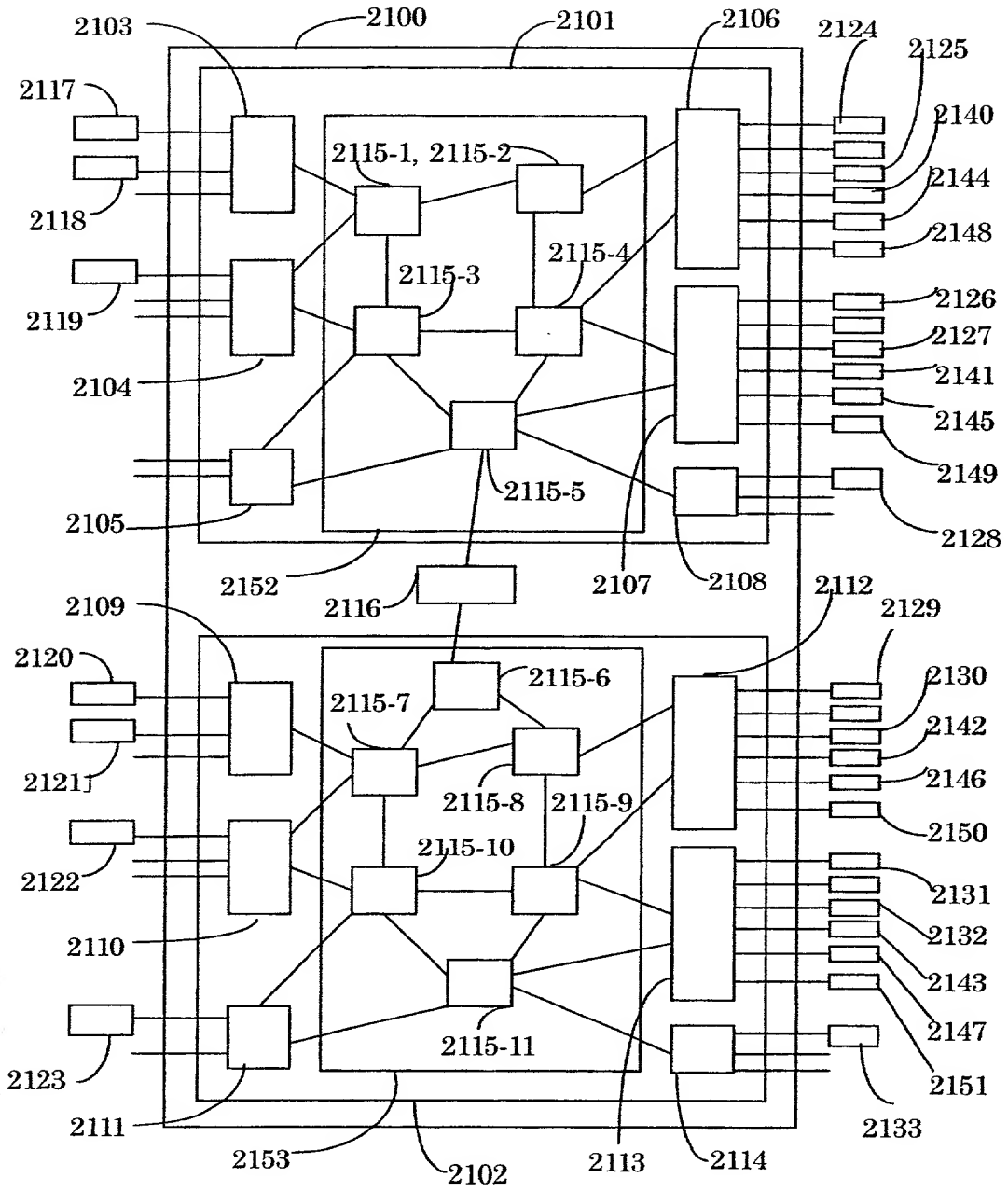

2103
2100
2101
2106
2124
2125
2117
2140
2115-1, 2115-2
2144
2118
2148
2115-4
2115-3
2126
2119
2127
2141
2104
2145
2149
2115-5
2105
2128
2152
2116
2107
2108
2112
2109
2129
2120
2115-6
2130
2115-7
2142
2121
2115-8
2115-9
2146
2150
2115-10
2122
2131
2132
2110
2143
2147
2115-11
2123
2151
2111
2133
2153
2102
2113
2114

FIG.353

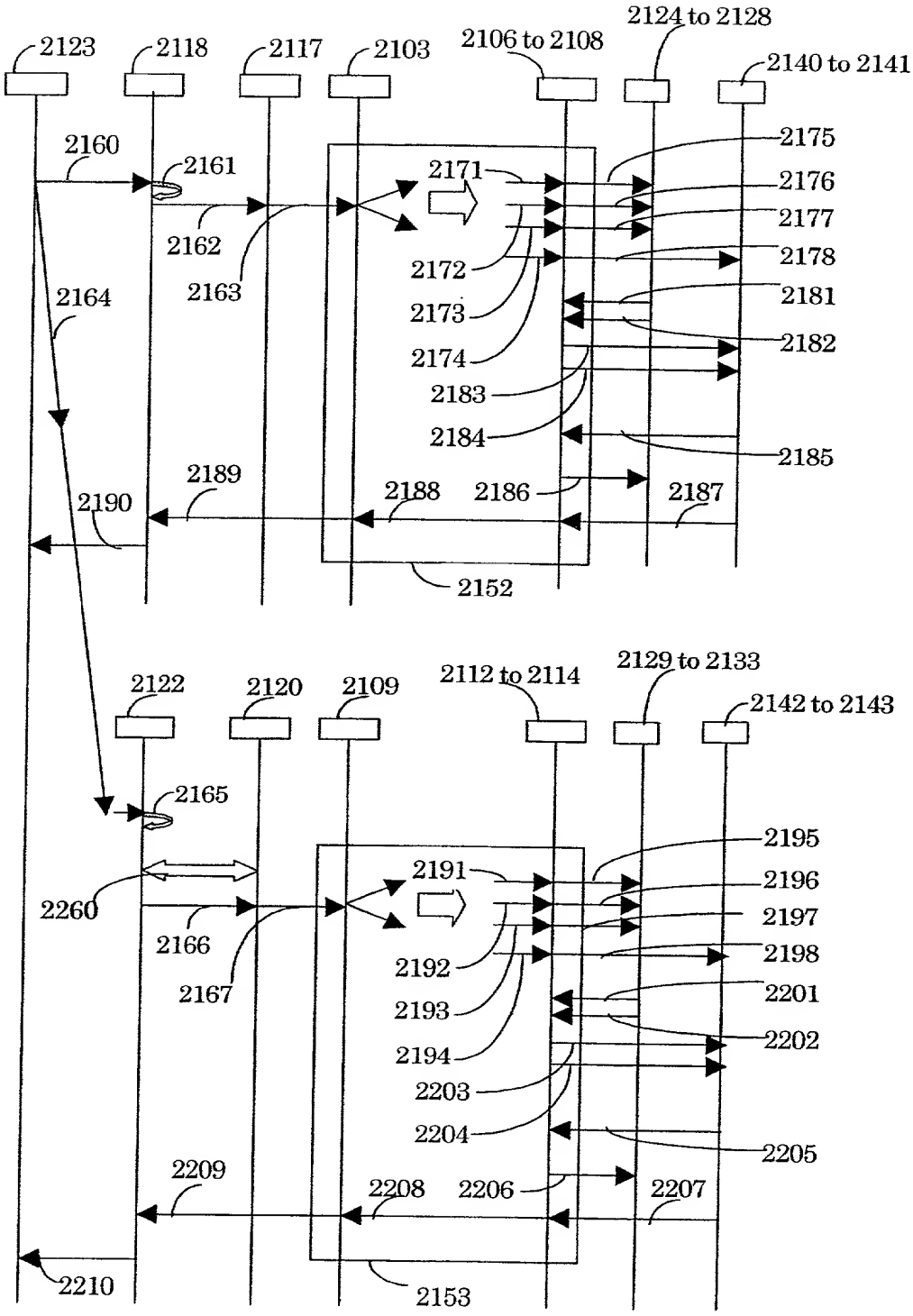

2123
2118
2117
2103
2106 to 2108
2124 to 2128
2140 to 2141
2160
2161
2162
2163
2164
2171
2172
2173
2174
2175
2176
2177
2178
2181
2182
2183
2184
2185
2186
2187
2188
2189
2190
2152
2122
2120
2109
2112 to 2114
2129 to 2133
2142 to 2143
2165
2260
2166
2167
2191
2192
2193
2194
2195
2196
2197
2198
2201
2202
2203
2204
2205
2206
2207
2208
2209
2210
2153

FIG.354

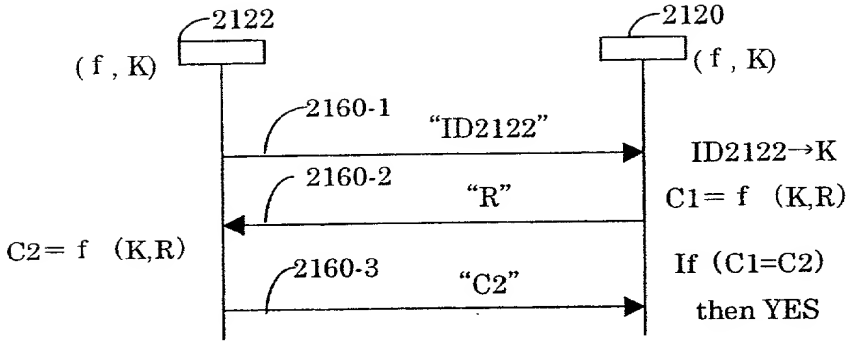
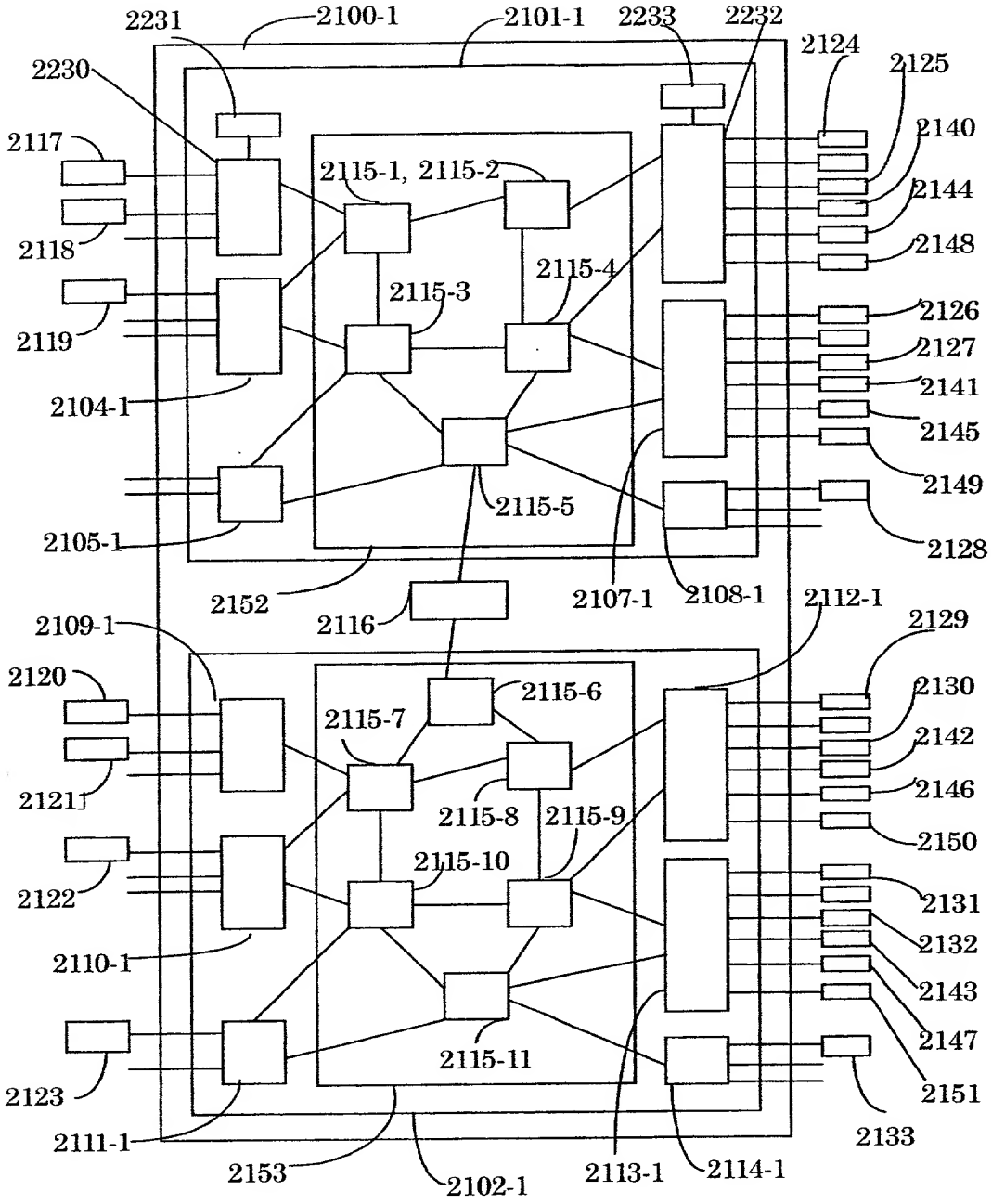
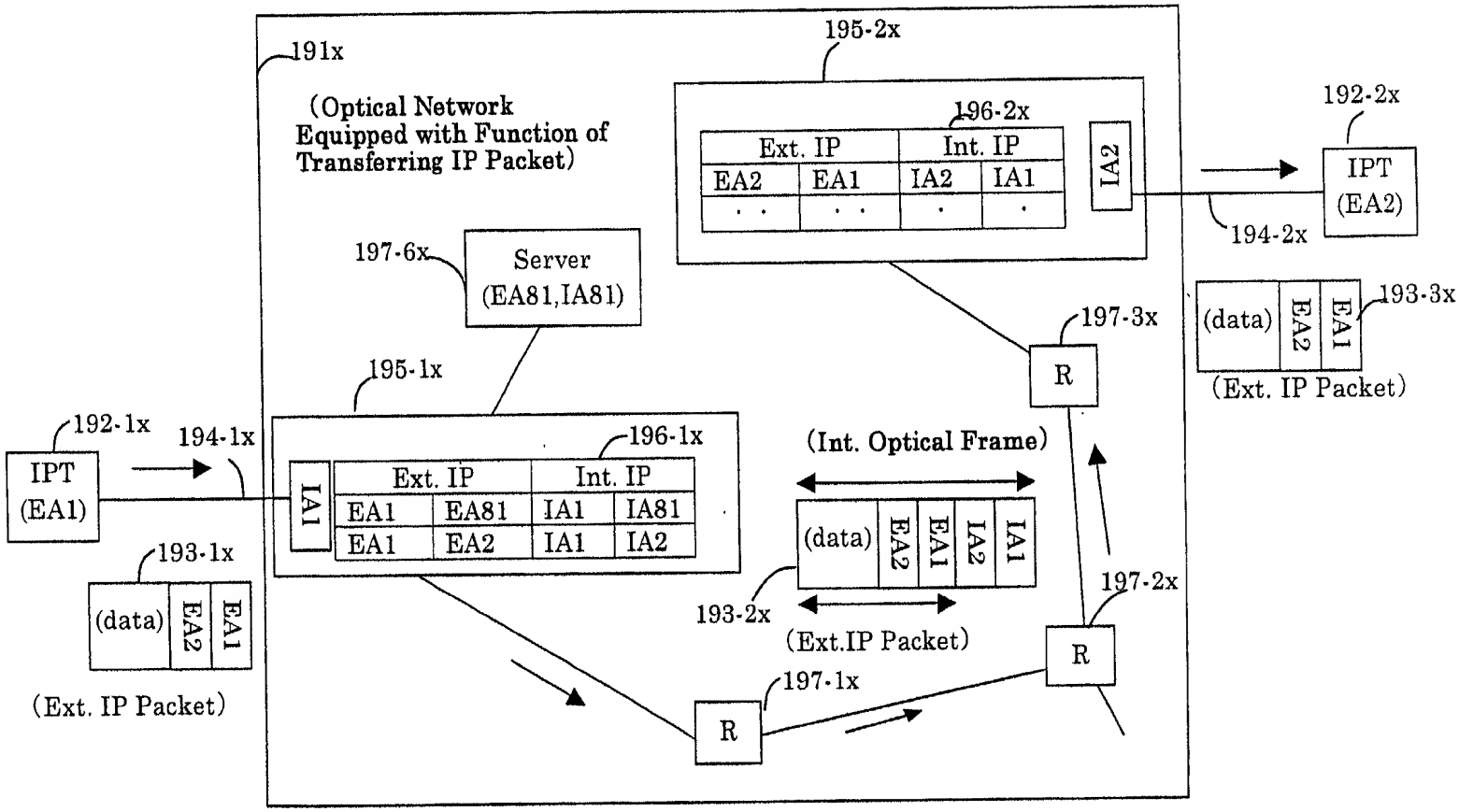

2122
(f, K)
2120
(f, K)
2160-1
"ID2122"
ID2122→K
2160-2
"R"
C1= f (K,R)
C2= f (K,R)
2160-3
"C2"
If (C1=C2)
then YES

FIG.355


2231
2100-1
2101-1
2233
2232
2124
2125
2230
2140
2117
2115-1, 2115-2
2144
2118
2148
2115-4
2115-3
2126
2119
2127
2141
2104-1
2145
2149
2115-5
2105-1
2128
2152
2116
2107-1
2108-1
2112-1
2109-1
2129
2120
2115-6
2130
2115-7
2142
2121
2146
2115-8
2115-9
2150
2115-10
2122
2131
2132
2110-1
2143
2147
2115-11
2123
2151
2133
2111-1
2153
2102-1
2113-1
2114-1

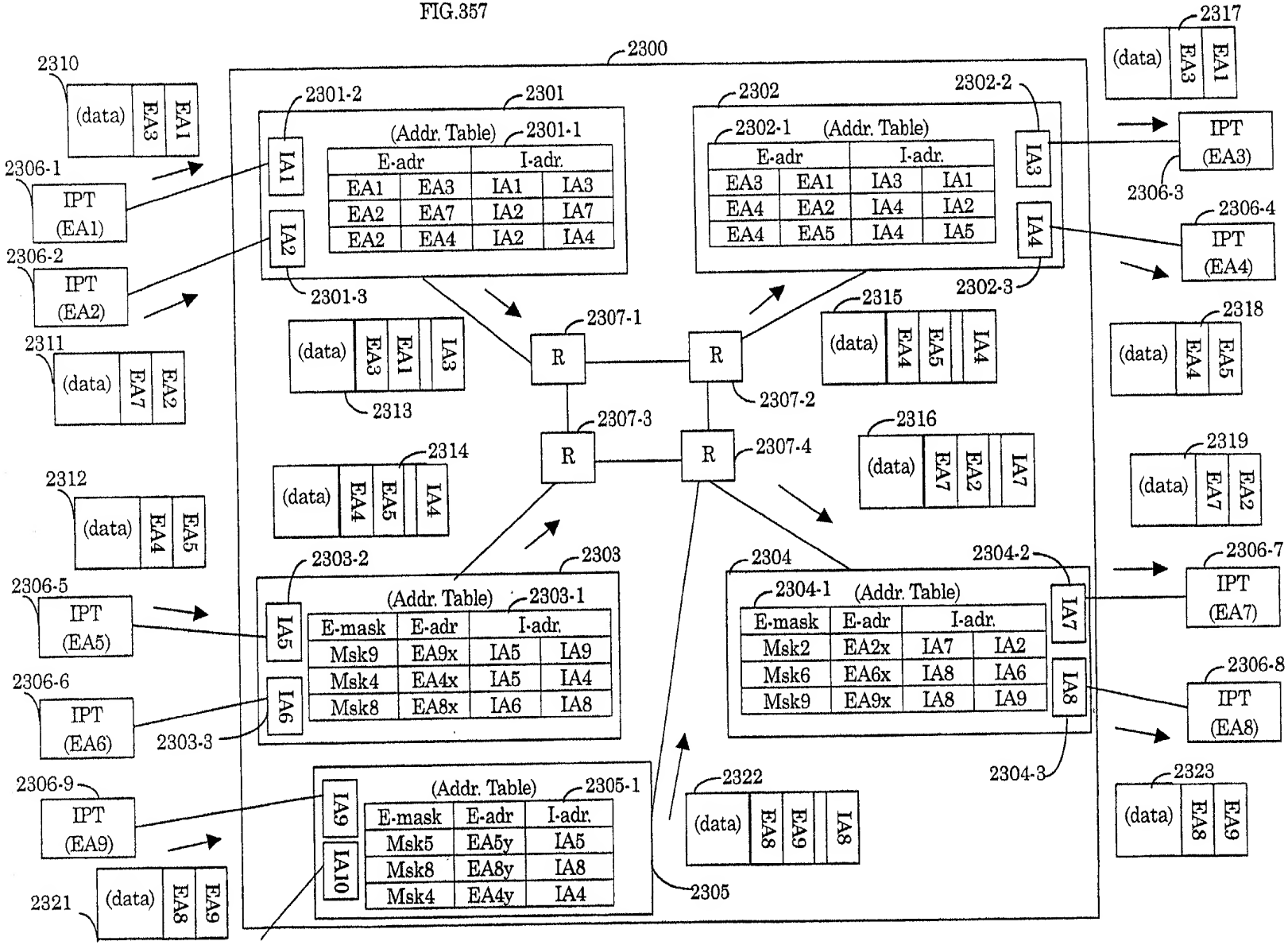
TD2280 2922860

FIG.356



TD2280 '292.2860

FIG.357



GIG.358

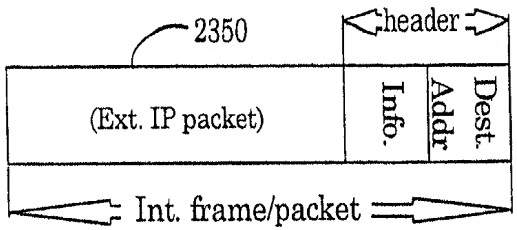


FIG.359

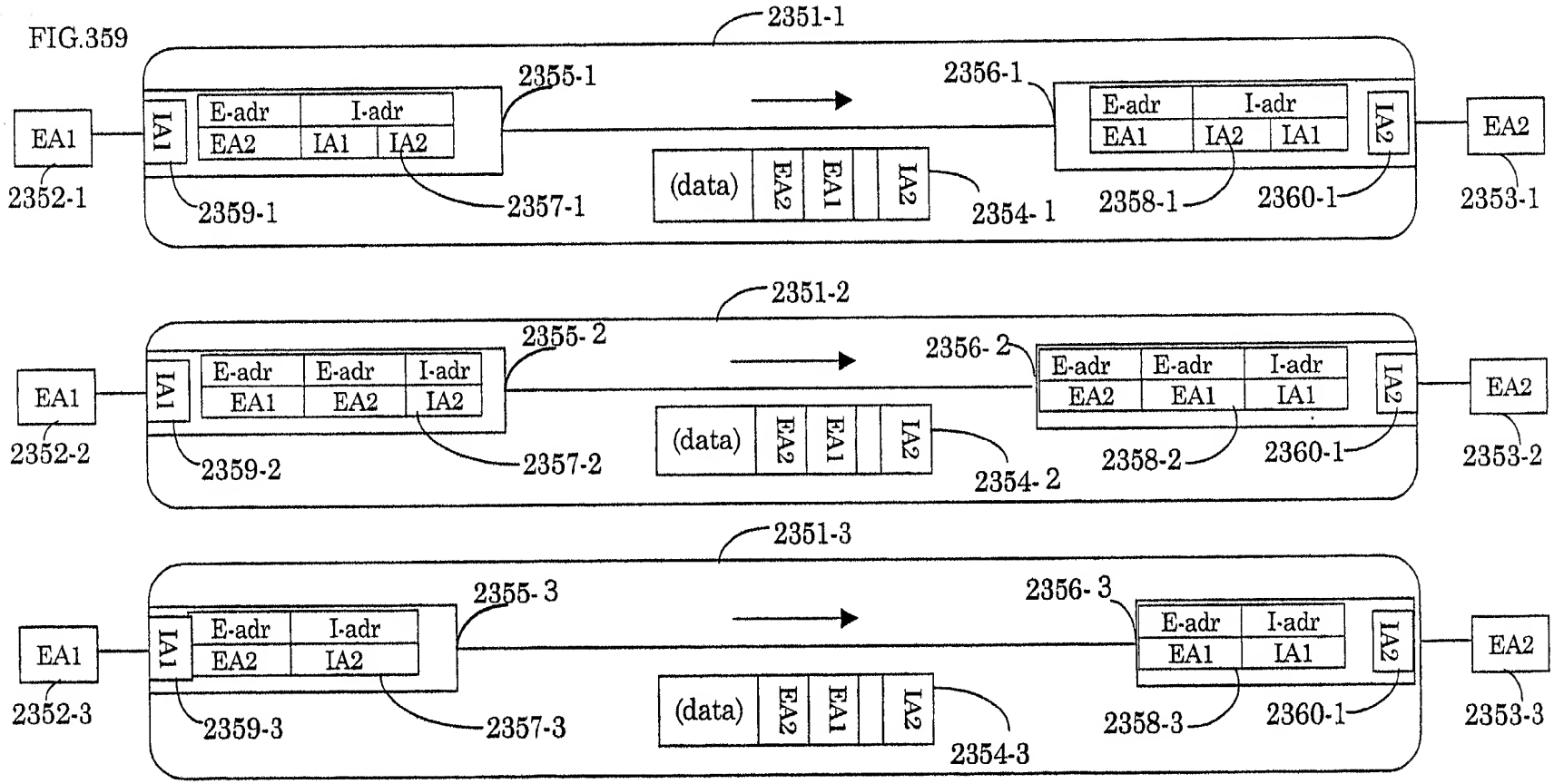
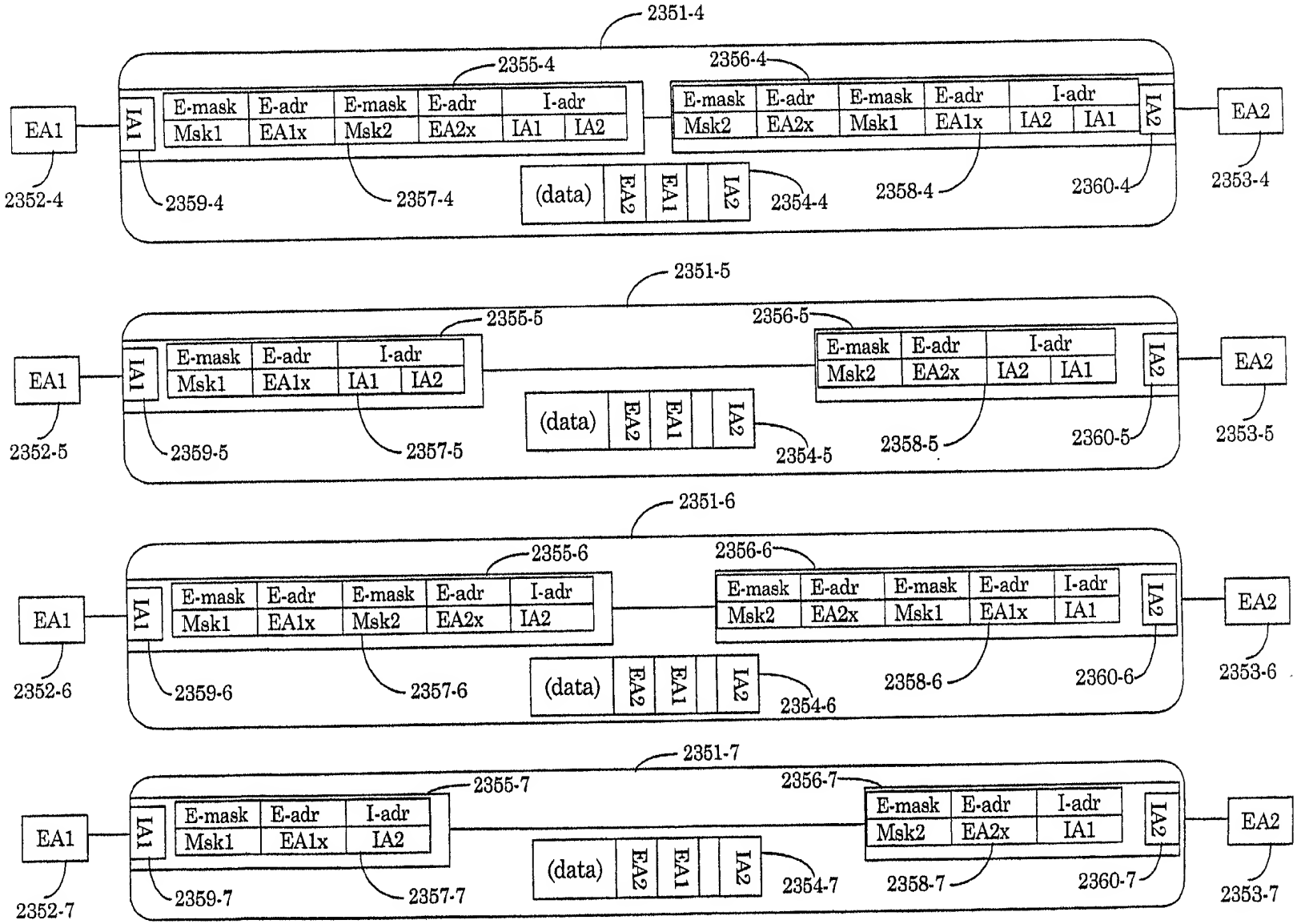


FIG.360


2351-4
2355-4
2356-4
EA1
IA1
E-mask
E-adr
E-mask
E-adr
I-adr
Msk1
EA1x
Msk2
EA2x
IA1
IA2
E-mask
E-adr
E-mask
E-adr
I-adr
Msk2
EA2x
Msk1
EA1x
IA2
IA1
IA2
EA2
2352-4
2359-4
2357-4
(data)
EA2
EA1
IA2
2354-4
2358-4
2360-4
2353-4
2351-5
2355-5
2356-5
EA1
IA1
E-mask
E-adr
I-adr
Msk1
EA1x
IA1
IA2
E-mask
E-adr
I-adr
Msk2
EA2x
IA2
IA1
IA2
EA2
2352-5
2359-5
2357-5
(data)
EA2
EA1
IA2
2354-5
2358-5
2360-5
2353-5
2351-6
2355-6
2356-6
EA1
IA1
E-mask
E-adr
E-mask
E-adr
I-adr
Msk1
EA1x
Msk2
EA2x
IA2
E-mask
E-adr
E-mask
E-adr
I-adr
Msk2
EA2x
Msk1
EA1x
IA1
IA2
EA2
2352-6
2359-6
2357-6
(data)
EA2
EA1
IA2
2354-6
2358-6
2360-6
2353-6
2351-7
2355-7
2356-7
EA1
IA1
E-mask
E-adr
I-adr
Msk1
EA1x
IA2
E-mask
E-adr
I-adr
Msk2
EA2x
IA1
IA2
EA2
2352-7
2359-7
2357-7
(data)
EA2
EA1
IA2
2354-7
2358-7
2360-7
2353-7